

z/OS Management Facility User Experience: Workflows and Workflow Editor

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Session 24565

By Ed Webb of SAS



z/OS Management Facility (z/OSMF) Workflows

Agenda

- z/OSMF Workflows
 - Why Use z/OSMF Workflows?
 - Our Workflow History
- Use the z/OSMF Workflow Editor to Define a Workflow
 - Define a Workflow to RECEIVE RSU PTFs
 - Run the RSU RECEIVE Workflow
- z/OSMF Selected Changes Since March 2019

z/OS Management Facility (z/OSMF) Workflows

Why Use z/OSMF Workflows?

- No automation tools
- Retiring staff
- Prepare for someone else to take over
- Provides a standard repeatable process that others should be able to use with little training

z/OSMF Workflows – First Involvement

- In June 2014, we wanted a z/OS Userid Creation workflow for z/OSMF so let's build one
 - Whoops! Workflow file is XML in ASCII – not EBCDIC
 - ISPF Edit does not provide syntax checks or models for XML as it does for REXX and COBOL and JCL
 - ISPF Compare command does not work for ASCII files
 - Found an existing workflow from a TSO Redbook to start
 - Made some but not adequate progress

z/OSMF Workflows – First Involvement

- In Dec. 2016, IBM made the z/OSMF Workflow Editor (WFE) available in z/OS 2.2 via SPE (Small Program Enhancement) PTFs
 - APPLIED PTFs in January 2017
- We started work to define a workflow
 - First effort was a SYSRES Restore and Customization process
- Went to z/OSMF Workflow lab at SHARE March 2017 and at later SHAREs, talked with z/OSMF architects and developers like Hiren Shah and “Joey” Zhu
- SHARE Workflow Labs are this Thursday at 11:15-12:15 and 16:30-17:30 in room 102B

z/OSMF Workflows – Overview of Our Process

- Our basic process was to take existing notes and put them into a xml file via the WFE
 - Started with a Workflow of Instruction Steps based on our current process
 - Converted Instruction Steps to JCL Template Steps as appropriate
 - We copied JCL for jobs into z/OS Unix template files (EBCDIC) for use by WFE
 - By May 2017, we started using our Restore Workflow to manage the process
- We had a directory with a variables file, an XML file and the JCL template files.
 - Each month we copied the files (varfile, xml and templates) from the previous month directory to a new directory
 - Edited the new xml and varfile with ISPF 3.17 to make mass changes to values where IBM does not support variable substitutions (For Example: Step Descriptions)
 - Edited with WFE to verify that basic xml is still good after mass changes, also to add steps or change settings
- In z/OSMF, Created Workflow and ran the steps.
 - We last ran that Restore workflow in Oct. 2017 when our need to do these Restores ended, for now.

z/OSMF Workflows – Overview of Our Process

- Starting in May 2017 with z/OS 2.2 RSU1704, Defined our RSU process as a z/OSMF Workflow.
 - Notes and JOBs became steps similar to the Restore, just more steps and JOBs.
 - 33 steps total
 - Each month we tried to improve our Workflow build and creation process.
- ServerPac came and we followed its non-z/OSMF workflow process to implement z/OS 2.3.
 - I want ServerPac to ship with a z/OSMF Workflow instead of its current process.
 - See z/OS 2.4 Statement of Direction about CICS ServerPac in IBM Announcement [219-013](#) on Feb. 26, 2019.
 - IBM began shipping CICS Upgrade as a Workflow in Dec. 2019

z/OSMF Workflows – Current Status

- Each month we APPLY RSU service to z/OS 2.3
 - First time we cloned the z/OS 2.2 workflow and varfile and templates
 - We added Step Conditions to SKIP steps not relevant to a specific z/OS image.
- Still lots of ISPF 3.17 editing to make “mass” changes to xml and templates
 - Workflow Step Titles and Descriptions **cannot** have variable substitutions
 - Instructions and JCL and REXX and such can have variable substitutions
- A major run-time issue was providing a unique JOB name for those RSU Workflow Steps
 - In March 2018, after consulting with Hiren Shah and Gary Puchkoff at SHARE, and getting some help from one of their coworkers in China, we automated the JOB name changes.
 - `//R3U${instance-RSU_id}A JOB` (becomes RSU1805A JOB ..., for example)
- In May 2018, my coworker, who ran most of the RSU workflows each month, retired. Then I trained my replacement to use RSU workflows. Then I retired. And in Dec 2019, he retired.

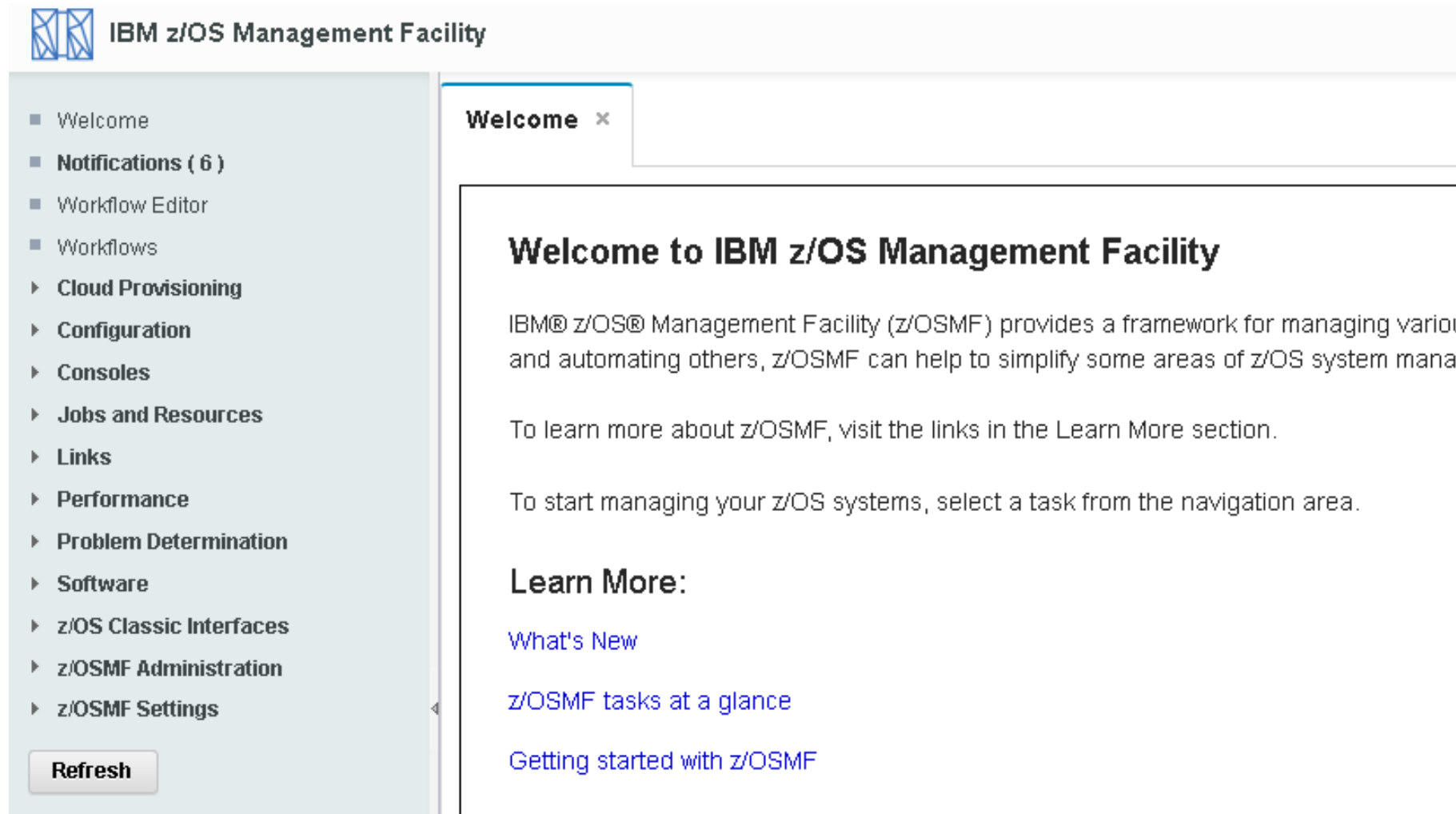
z/OSMF Workflows – Goal for This Session

- One RSU part that had not been automated in a Workflow was RECEIVE RSU PTFs so that became an important set of steps to put in a Workflow. I'm going to show you how we built the RECEIVE RSU Workflow and how we run it.
- RECEIVE is only done once per RSU cycle but APPLY is done many times
- Workflow and Workflow Editor are part of the z/OSMF CORE functions, so if you have implemented the Core Setup for Security in the IZUSEC job in SAMPLIB, and you now have z/OSMF up and running, you should be good to start.
- Let's get into z/OSMF.



WHAT DOES A WORKFLOW LOOK LIKE?

z/OS Management Facility Welcome



IBM z/OS Management Facility

- Welcome
- **Notifications (6)**
- Workflow Editor
- Workflows
- ▶ **Cloud Provisioning**
- ▶ **Configuration**
- ▶ **Consoles**
- ▶ **Jobs and Resources**
- ▶ **Links**
- ▶ **Performance**
- ▶ **Problem Determination**
- ▶ **Software**
- ▶ **z/OS Classic Interfaces**
- ▶ **z/OSMF Administration**
- ▶ **z/OSMF Settings**

Welcome x

Welcome to IBM z/OS Management Facility

IBM® z/OS® Management Facility (z/OSMF) provides a framework for managing various z/OS systems and automating others, z/OSMF can help to simplify some areas of z/OS system management.

To learn more about z/OSMF, visit the links in the Learn More section.

To start managing your z/OS systems, select a task from the navigation area.

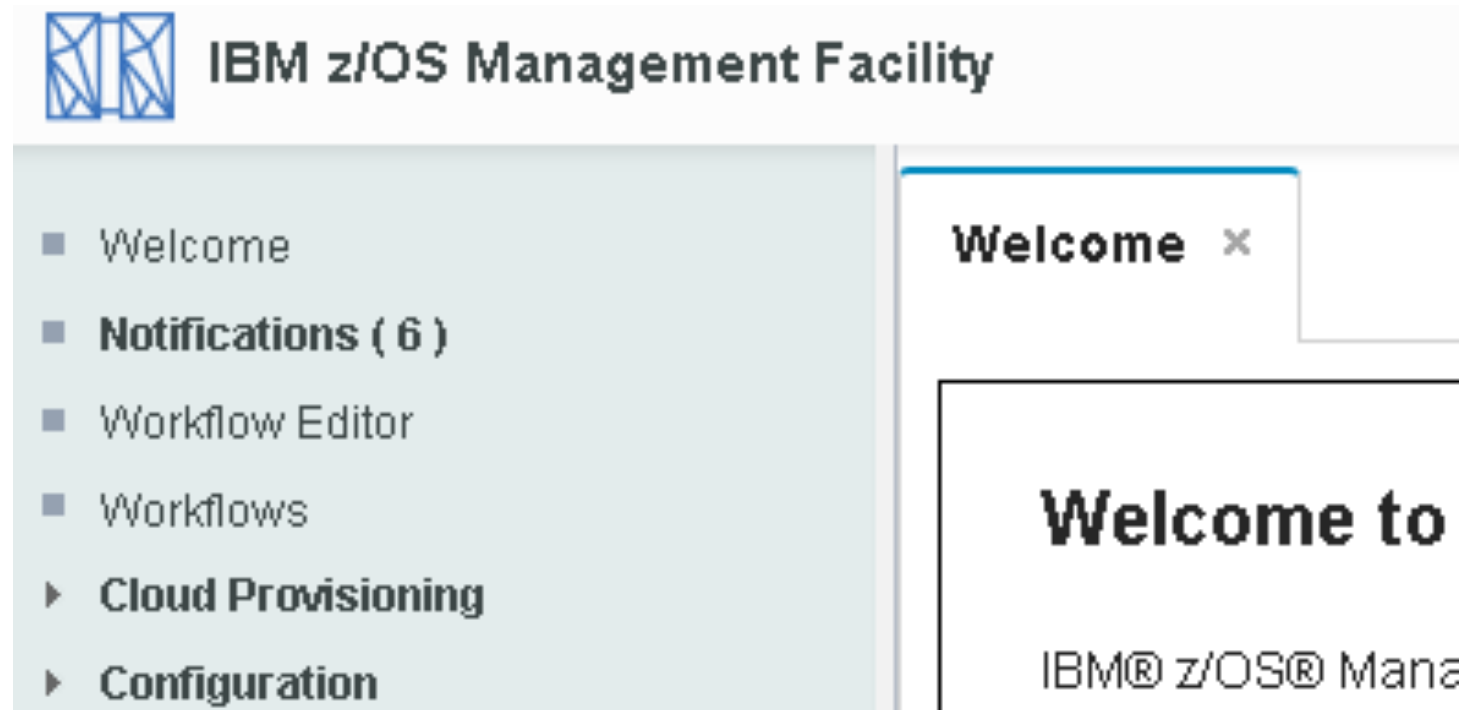
Learn More:

- [What's New](#)
- [z/OSMF tasks at a glance](#)
- [Getting started with z/OSMF](#)

Refresh

z/OS Management Facility

Workflow Editor and Workflows functions



Workflows 

He

Search

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z/OSMF WorkFlows: z/OS Migration Workflow

Welcome x

Workflows x

Workflows ▶ z/OS Migration to 2.3 from 2.2 e0zm100_v2r3 - Workflow_0

z/OS Migration to 2.3 from 2.2 e0zm100_v2r3 - Workflow_0

Description:
e0zm100_v2r3
Percent complete:

74%

Owner:
vinuge
Steps complete:
136 of 183

System:
DEVAPLEX.DEVT (DEVT)
Status:

In Progress

Is Callable:
Cannot be called by another workflow
Access([Learn More](#)):

Public

Workflow Steps

Actions ▼

↔ No filter applied

☐	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☐	✓ Complete	1	■ Discover z/OS features in use		Yes	snosew	
☐	✓ Complete	2	+ Chapter 1. Migration: Introduction				
☐	■ In Progress	3	+ Chapter 2. General migration actions for everyone migrating to z/OS V2R3				
☐	■ In Progress	4	+ Chapter 3. Migration from z/OS V2R2				
☐	Unassigned	5	■ Provide feedback to IBM on your migration experience		No		



TIME TO DEFINE A WORKFLOW



z/OSMF WFE: Choose New Workflow

Editor ×

Edit Workflow Definition

☒ Create New Workflow

☐ Open Existing Workflow

OK **Cancel** **Help**

z/OSMF WFE: Fill Out Metadata Tab

Workflow Editor

File Path:

Metadata Steps Variables Feedback Input Properties

In a workflow definition, the metadata is used to identify the workflow and provide more information about it. On this tab, you can modify the workflow identifier, description, category, version, and other basic information about the selected workflow definition.

* Workflow ID:
Enter a short text value to identify this workflow

Scope:
None

☐ Callable Workflow

Range:
System

Default Name:

* Description:
In this workflow definition, a basic set of elements and properties is

Category:
General

☐ Omit the prefix from instance variable references.

☐ Users can take ownership of steps automatically.

☐ Contains parallel steps.

z/OSMF WFE: Fill Out Metadata Tab

Add Required Values, Set AutoTakeOwnership

Workflow Editor

File Path:

Metadata Steps Variables Feedback Input Properties

In a workflow definition, the metadata is used to identify the workflow and provide more information about it. On this tab, you can modify the workflow identifier, description, category, version, and other basic information about the selected workflow definition.

* Workflow ID:

Category:

Scope:

☐ Callable Workflow

Range:

Default Name:

* Description:

☒ Omit the prefix from instance variable references.

☒ Users can take ownership of steps automatically.

☐ Contains parallel steps.

z/OSMF WFE: Fill Out Metadata Tab

Complete Required Info and Save

☐ Callable Workflow

Range:

System

Default Name:

RECEIVE ALL RSU Service To Date

* Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

* Version:

1.10

* Vendor:

SAS IT IE Mainframe

☒ Users can take ownership of steps automatically.
☐ Contains parallel steps.

Save

Save As...

Cancel

z/OSMF WFE: Fill Out Metadata Tab

Name the xml file and Complete the Save

Save File As

* Workflow definition file:

/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Workflow variable input file:

Select or type

OK Cancel

z/OSMF WFE: Now It's a Workflow File

Workflow Editor

File Path: /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Metadata Steps Variables Feedback Input Properties

In a workflow definition, the metadata is used to identify the workflow and provide more information about it. On this tab, you can modify the workflow identifier, description, category, version, and other basic information about the selected workflow definition.

* Workflow ID:
RSU1806_RECEIVE_Service

Category:
General

Scope:
Sysplex

☐ Callable Workflow

Range:
System

Default Name:
RECEIVE ALL RSU Service To Date

* Description:
RECEIVE ORDER for ALL PTFs through

☒ Omit the prefix from instance variable references.

☒ Users can take ownership of steps automatically.

☐ Contains parallel steps.

z/OSMF WFE: Now It's a Workflow File

ISPF 3.17 UDLList Supports Wildcards!

```
er View Script Help
[Icons] | Attention PA1 PA2 PA3 Reset Clear

Menu RefList RefMode Utilities Options File_Systems
z/OS UNIX Directory List Utility
Option ==> █
blank Display directory list P Print direct
Pathname . . . /u/snosew/zOSMF*/RSUz*/RSU18*

Enter "/" to select option
/ Confirm File Delete
/ Confirm Non-empty Directory Delete

When the directory list is displayed, enter either:
"/" on the directory list line command field for the comm
an ISPF line command, the name of a TSO command, CLIST, o
"=" to execute the previous command.
```

z/OSMF WFE: Now It's a Workflow File

File Edit Session Options Transfer View Script Help



Attention PA1 PA2 PA3 Reset Clear

Menu Utilities View Options Help

z/OS UNIX Directory List

Command ==>

List . . . : /u/snosew/zOSMF*/RSUz*/RSU18*

EUID . . . : 9936

Command	Pathname	Message	Type	Permission
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1801		Dir	rxwxrwxr-x
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1802		Dir	rxwxrwxr-x
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1803		Dir	rxwxrwxr-x
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1804		Dir	rxwxrwxr-x
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1805		Dir	rxwxrwxr-x
	/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806	Listed	Dir	rxwxr-xr-x

***** Bottom of data *****

z/OSMF WFE: Now It's a Workflow File

Remember It's in ASCII so Use VA or EA

```
File Edit Session Options Transfer View Script Help
[Icons] [?] [i] | Attention PA1 PA2 PA3 Reset Clear

Menu Utilities View Options Help

z/OS UNIX Directory List

Command ===>

Pathname . . : /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE
EUID . . . : 9936
Command  Filename                                Message                                Type Permission
-----
.
..
va$RECEIVE.xml                                     Dir      rwxr-xr-x
                                           Dir      rwxr-xr-x
                                           File     rw-r--r--
***** Bottom of data *****
```

z/OSMF WFE: Now It's a Workflow File

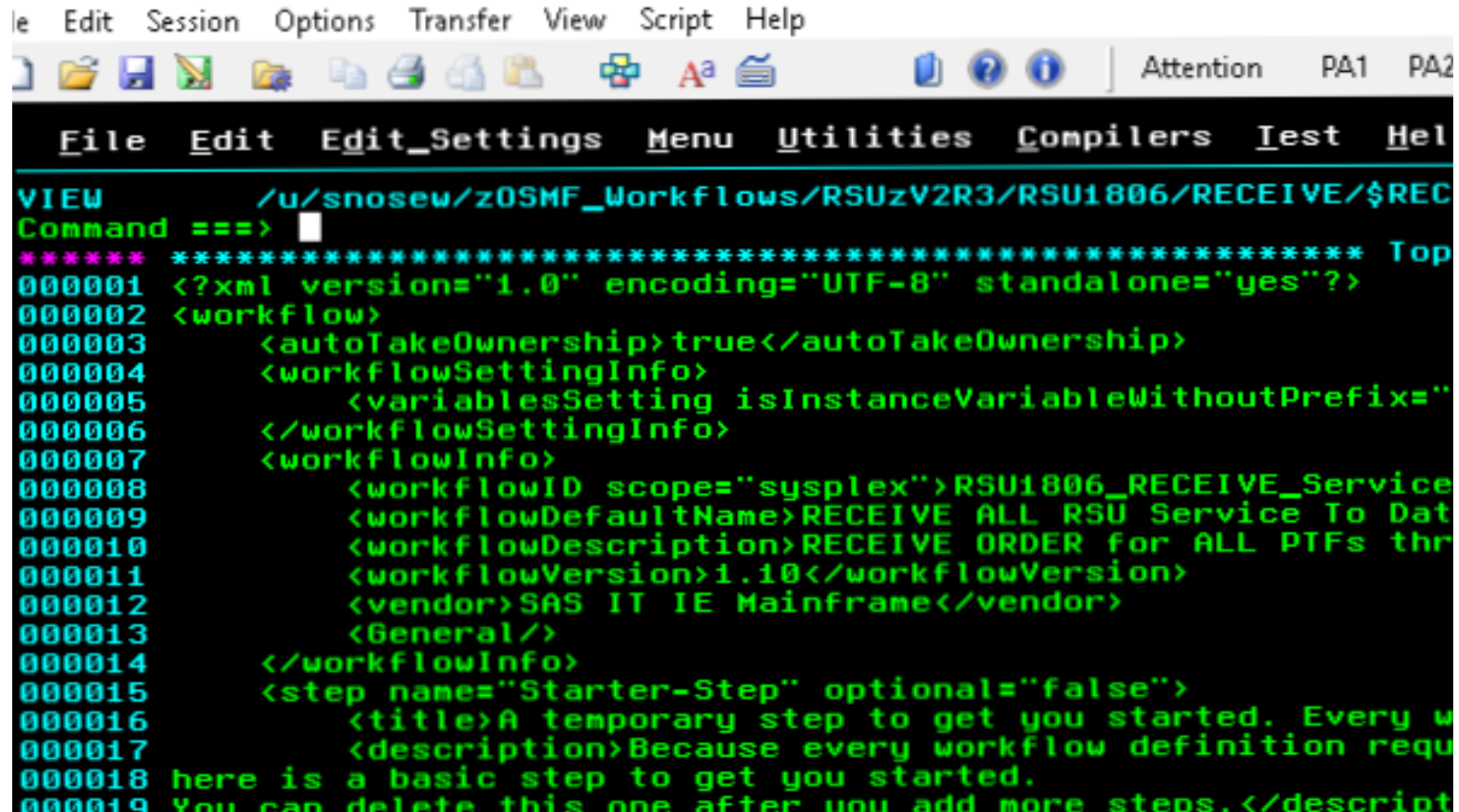
```
File Edit Session Options Transfer View Script Help
[Icons] Attention PA1 PA2 PA3 Reset Clear

File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/$RECEIVE.xml
Command ==>

***** Top of Data *****
000001 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
000002 <workflow>
000003   <autoTakeOwnership>true</autoTakeOwnership>
000004   <workflowSettingInfo>
000005     <variablesSetting isInstanceVariableWithoutPrefix="true"/>
000006   </workflowSettingInfo>
000007   <workflowInfo>
000008     <workflowID scope="sysplex">RSU1806_RECEIVE_Service</workflowID>
000009     <workflowDefaultName>RECEIVE ALL RSU Service To Date</workflowDefaultName>
000010     <workflowDescription>RECEIVE ORDER for ALL PTFs through today for this z/OS
000011     <workflowVersion>1.10</workflowVersion>
000012     <vendor>SAS IT IE Mainframe</vendor>
000013     <General/>
000014   </workflowInfo>
000015   <step name="Starter-Step" optional="false">
000016     <title>A temporary step to get you started. Every workflow definition requi
000017     <description>Because every workflow definition requires at least one step,
000018 here is a basic step to get you started.
000019 You can delete this one after you add more steps.</description>
000020     <instructions substitution="false">Use the Instructions area to describe in
000021 user needs to do to complete the step.
000022 On completion of the step, the user should press Finish
000023 to have the step marked complete in the Workflows task.</instructions>
000024     <weight>1</weight>
000025     <autoEnable>>false</autoEnable>
000026     <canMarkAsFailed>>false</canMarkAsFailed>
000027   </step>
000028 </workflow>
***** Bottom of Data *****
```

z/OSMF WFE: Now It's a Workflow File



The screenshot displays a web-based interface for defining a workflow. The top navigation bar includes menus like 'File', 'Edit', 'Session', 'Options', 'Transfer', 'View', 'Script', and 'Help'. Below this is a toolbar with various icons for file operations and editing. The main content area shows a text editor with a workflow definition in XML format. The XML is displayed on a black background with green text. The workflow is titled 'RECEIVE' and is associated with the service 'RSU1806_RECEIVE_Service'. It includes a 'Starter-Step' which is a temporary step to get the user started. The XML structure is as follows:

```
VIEW /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/$REC
Command ==>
***** Top
000001 <?xml version="1.0" encoding="UTF-8" standalone="yes"?>
000002 <workflow>
000003   <autoTakeOwnership>true</autoTakeOwnership>
000004   <workflowSettingInfo>
000005     <variablesSetting isInstanceVariableWithoutPrefix="
000006   </workflowSettingInfo>
000007   <workflowInfo>
000008     <workflowID scope="sysplex">RSU1806_RECEIVE_Service
000009     <workflowDefaultName>RECEIVE ALL RSU Service To Dat
000010     <workflowDescription>RECEIVE ORDER for ALL PTFs thr
000011     <workflowVersion>1.10</workflowVersion>
000012     <vendor>SAS IT IE Mainframe</vendor>
000013     <General/>
000014   </workflowInfo>
000015   <step name="Starter-Step" optional="false">
000016     <title>A temporary step to get you started. Every w
000017     <description>Because every workflow definition requ
000018 here is a basic step to get you started.
000019 You can delete this one after you add more steps.</descript
```

z/OSMF WFE: What's In the Steps Tab?

Workflow Editor

File Path: /u/snosew/zOSMF_Workflows/RSUZV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Metadata

Steps

Variables

Feedback

Input Properties

A workflow is composed of one or more units of work called steps. A workflow definition file in step can contain substeps. On this tab, you can launch actions to view or modify the steps in

Actions ▾ | Create Step

	Step No.	Name	Title
☐	1	■ Starter-Step	A temporary step to get you started. Every work

z/OSMF WFE: Primed with Dummy Step

Metadata

Steps

Variables

A workflow is composed of one or more units. A workflow definition file must contain at least one step. On this tab, you can learn about or modify the steps in the selected workflow.

Actions ▾ |

Create Step

	Step No.	Name	Title
☒	1	Starter-Step	A temporary step to get you started. Every workflow definition requires at least one step.

Total: 1 Selected:

Variable Details

Step Details

Overview

Prerequisites

Instructions

Type

Conditions

Security

Step Overview

Overview information is required for every step. On this tab, you can modify the step title, description, and other basic information about the selected step.

* Name:

Starter-Step

* Title:

A temporary step to get you started. Every workflow definition requires at least one step.

Description:

Because every workflow definition requires at least one step, here is a basic step to get you started. You can delete this one after you add more steps.

Help

z/OSMF WFE: Help for This Step Overview Tab

The screenshot shows a web browser window displaying the IBM Knowledge Center. The address bar shows the URL: https://s390devt.sas.com:32208/zosmf/helps/SSB2H8_2.3.0/com.ibm.zosmfworkflows.editor.help.doc/izuWEhpWorkflowEditorStepOverview.html. The page header includes the IBM logo and "IBM Knowledge Center" with a language dropdown set to "English". A search bar is present below the header.

The left sidebar contains a "Table of Contents" for "z/OS Management Facility 2.3.0". The "Workflow Editor" section is expanded, showing "Workflow Editor task" and "Steps tab". The "Steps tab" is further expanded, highlighting the "Overview tab". Other links under "Steps tab" include "Create Step", "Copy Step", "Moving a step within a workflow", "Prerequisites tab", and "Instructions tab".

The main content area shows the breadcrumb "Workflow Editor > Workflow Editor task > Steps tab > Overview tab". The title is "Overview tab". The text explains that the Overview tab is used to view and modify step information. It references "Table 1" for fields in the Overview tab.

Table 1. Fields in the Overview tab

Column	Description
Name	Name of the step. If you change the step name, the Workflow Editor applies this change throughout the workflow definition, wherever the step name is referenced. For example, the Workflow Editor finds and updates: • Prerequisites for any other steps that refer to the old step name • Conditional expressions in the workflow that refer to the old step name. If you select to change the step name, you are prompted to confirm your decision.
Title	Step title.
Description	Step description

z/OSMF WFE: Use Steps Tab to Create or Edit Step

Workflow Editor

File Path: /u/snosew/zOSMF_Workflows/RSUZV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Metadata

Steps

Variables

Feedback

Input Properties

A workflow is composed of one or more units of work called steps. A workflow definition file in step can contain substeps. On this tab, you can launch actions to view or modify the steps in

Actions ▾ | Create Step

	Step No.	Name	Title
☐	1	■ Starter-Step	A temporary step to get you started. Every work

z/OSMF WFE: Create a New Step

Leaf Step Can Be Run; Parent Step is Grouping

Create a New Step

☒ Leaf Step ☐ Parent Step

* Name:

Enter a unique step name here

* Title:

Enter a title for the step here

Description:

Enter a description for the step here

☐ Optional Step

☐ Auto-Enable

☐ Allow manual marking of step failure

OK

Cancel

Help

* Weight (1-1000):

Enter the step weight here

Skills:

Enter the skills for the step here

* Step Type:

Instructions Only

z/OSMF WFE: Create a New Step

Choose Step Type

Create a New Step

☒ Leaf Step ☐ Parent Step

* Name:

Enter a unique step name here

* Title:

Enter a title for the step here

Description:

Enter a description for the step here

- ☐ Optional Step
☐ Auto-Enable
☐ Allow manual marking of step failure

* Weight (1-1000):

Enter the step weight here

Skills:

Enter the skills for the step here

* Step Type:

Instructions Only

Instructions Only

File Template

Inline Template

REST API

Calling Step

OK

Cancel

Help

z/OSMF WFE: Create a New Step Set File Template and Its Location

Create a New Step

☒ Leaf Step ☐ Parent Step

* Name:

RECEIVE_RSU_PTFs

* Title:

RECEIVE RSU PTFs via SMP/E Internet Retrieval

Description:

Received RSU1806 SYSMODs and HOLDDATA into V2R3 Gzone using SMP/E Internet Service Retrieval; nnn PTFs RECEIVED. RSU1806 incl PUT/RSU1805 through PUT/RSU1806. SOURCEID automatically set to ORD00020 for these PTF

☐ Optional Step

☐ Auto-Enable

☐ Allow manual marking of step failure

OK

Cancel

Help

* Weight (1-1000):

100

Skills:

Systems Programmer

* Step Type:

File Template

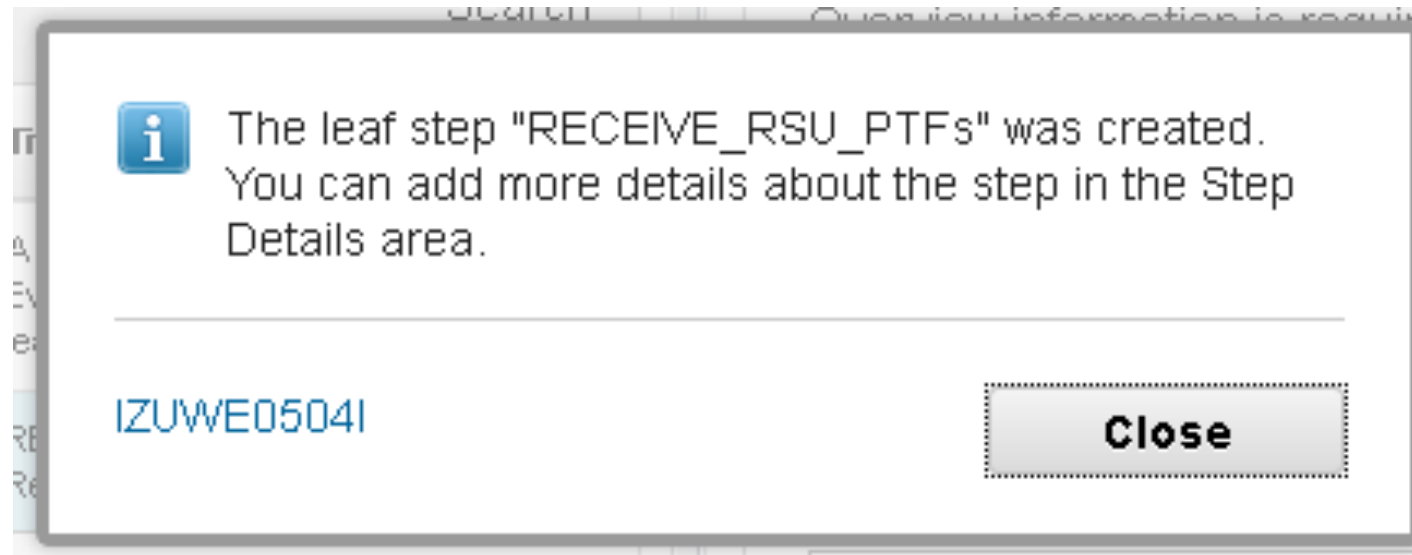
* Location of file template:

3UzV2R3/RSU1806/RECEIVE/R3U1806A.template

☐ Path name contains substitution

APAR PH01154 and PH14185 will fix Path Name Substitution problems

z/OSMF WFE: Create a New Step Save



z/OSMF WFE: There's a New Step

Workflow Editor

File Path: /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

MetadataStepsVariablesFeedback

A workflow is composed of one or more units of work called steps. A workflow definition file must contain at least one step; each step can contain substeps. On this tab, you can launch actions to view or modify the steps in the selected workflow definition.

Actions |

Create StepSearch

Step No.	Name	Title
☐ 1	Starter-Step	A temporary step to get you started. Every workflow definition requires at least one step.
☒ 2	RECEIVE_RSU_PTF	RECEIVE RSU PTFs via SMP/E Internet Retrieval

Total: 2 Selected:
1

Variable Details

Step Details

OverviewPrerequisitesInstructionsTypeConditionsSecurityVariables

Step Overview

Overview information is required for every step. On this tab, you can modify the step title, description, and other basic information about the selected step.

* Name:

* Title:

Description:

Received RSU1806 SYSMODs and HOLDDATA into z/OS V2R3 Gzone using SMP/E Internet Service Retrieval; nnn PTFs RECEIVED. RSU1806 included PUT/RSU1805 through PUT/RSU1806. SOURCEID automatically set to ORD00020 for these PTFs.

* Weight (1-1000):

Help

SaveSave As...Cancel

z/OSMF WFE: Create a New Step

Variable Substitution in Instruction Tab

Variable Details

Step Details

◀

Overview

Prerequisites

Instructions

Type

Conditions

Security

Variables

```
Received RSU${instance-NRSU} SYSMODs and HOLDDATA into z/OS  
V2R3 Gzone using SMP/E Internet Service  
Retrieval; nnn PTFs RECEIVED.
```

☒ Contains variable substitution

Help

`${instance-NRSU}` is the string that will be replaced by the NRSU value 1806

z/OSMF WFE: Create a New Step

What Type of File Template?

Metadata

Steps

Variables

Feedback

In

A workflow is composed of one or more units of work called steps. A workflow definition file must contain at least one step; each step can contain substeps. On this tab, you can launch actions to view or modify the steps in the selected workflow definition.

Actions ▾

Create Step

Search

	Step No.	Name	Title
☐	1	■ Starter-Step	A temporary step to get you started. Every workflow definition requires at least one step.
☒	2	■ RECEIVE_RSU_PTFs	RECEIVE RSU PTFs via SMP/E Internet Retrieval

Variable Details

Step Details

Overview

Prerequisites

Instructions

Type

Step Type

The step type indicates the type of processing that the step performs. On this tab, you can modify the related details.

Step Type:

File Template ▾

Submit Template As:

Not specified

* Location of file template:

/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/R:

☐ Path name contains substitution

Max RC:

<

>

Help

z/OSMF WFE: Create a New Step

What Type of File Template?

Step Details

Overview

Prerequisites

Instructions

Type

Conditions

Security

Variables

File

Step Type

The step type indicates the type of processing that the step performs. On this tab, you can modify the related details.

Step Type: File Template

Submit Template As:
Not specified

* Location of file template:
/u/snosew/zOSMF_Workflows/R3U1806/RECEIVE/R3U1806A.template

☐ Path name contains substitution

Max RC:

Help

z/OSMF WFE: Create a New Step

What Type of File Template?

Overview

Prerequisites

Instructions

Type

Conditions

Security

Variables

File

Step Type

The step type indicates the type of processing that the step performs. On this tab, you can modify the related details.

Step Type:

Submit Template As:

JCL

Not specified

JCL

TSO-REXX-JCL

shell-JCL

TSO-REXX

TSO-UNIX-REXX

TSO-UNIX-shell

z/OSMF WFE: Create a New Step Template JCL and Attributes (part 1)

Overview

Prerequisites

Instructions

Type

Conditions

Security

Variables

F

Step Type

The step type indicates the type of processing that the step performs. On this tab, you can modify the related details.

Step Type: File Template

Submit Template As:

JCL

* Location of file template:

/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/R3U1806A.template

☐ Path name contains substitution

Max RC:

0

Max LRECL:

80

z/OSMF WFE: Create a New Step Template JCL and Attributes (part 2)

Variable Details

Step Details

Overview Prerequisites Instructions **Type** Conditions Security Variables F ▾

Template Contents:

☒ Contains variable substitution

Save As Dataset:

☐ Contains variable substitution

Save As UNIX File:

/u/snosew/zOSMF_Workflows/R3U1806/RECEIVE/R3U1806A.wfjob

☒ Contains variable substitution

z/OSMF WFE: Setup Variables

Welcome x Workflow Editor x

Help

Workflow Editor

File Path: /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Metadata Steps Variables Feedback Input Properties

Variables can be used for substitution in workflow step instructions and templates. On this tab, you can launch actions to view and modify the variables in the selected workflow definition.

Actions ▾ | Create Variable Search

Variable Name	Scope	Category
There are no variables defined for this workflow. Press the "Create Variable" button to add a new variable.		

z/OSMF WFE: Setup Variables

Let's Create Several Variables

Workflow Editor

File Path:

Metadata

Steps

Variables

Feedback

Input Properties

Variables can be used for substitution in workflow step instructions and templates. On this tab, you can launch actions to view and modify the variables in the selected workflow definition.

Actions ▾

Create Variable

Sea

Create Variable

Create Multiple Variables

Copy

Delete

Configure Columns...

Clear Sorts

Clear Search

	Scope	Category
There are no variables defined for this workflow. Press the "Create Variable" button to add a new variable.		

Total: 0 Selected: 0

Save

Save As...

Cancel

z/OSMF WFE: Setup Variables

Start of Variable Setup

Create Multiple Variables

In the table, select the basic properties that are common to all variables, such as name, scope, and type. When you are done, click Finish to save the variables and make them available for use in the workflow steps. To further customize the variables, use the Variable Details area for each variable, where you can add more properties or change these initial settings.

Create Variables Table

Actions ▾

☐	Name	Scope	Label	Abstract	Description	Category	Type
☐	PRSU	instance ▾	Previous_RSU	Previous RSU numbe	RSU before current o	general ▾	string ▾
☐	CRSU	instance ▾	Current_RSU	Current RSU number	RSU before the new	general ▾	string ▾
☐	NRSU	instance ▾	New_RSU	New RSU number	RSU that we are APP	general ▾	string ▾

Total: 3 Selected: 0

Finish

Cancel

Help

z/OSMF WFE: Setup Variables

Start of Variable Setup

Create Multiple Variables

In the table, select the basic properties that are common to all variables, such as name, scope, and type, and make them available for use in the workflow steps. To further customize the variables, click on the variable name, where you can add more properties or change these initial settings.

Create Variables Table

Actions ▾					
☐	Name	Scope	Label	Abstract	Description
☐	PRSU	instance ▾	Previous_RSU	Previous RSU number	RSU before creation
☐	CRSU	instance ▾	Current_RSU	Current RSU number	RSU before the current
☐	NRSU	instance ▾	New_RSU	New RSU number	RSU that we are creating

z/OSMF WFE: Setup Variables VARFILE Contents

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/$RECEIVE.varfile
Command ==>
***** Top of Data *****
.OAAAB PRSU=1804
.OAAAC CRSU=1805
.OAAAD NRSU=1806
.OAAAE PWEK=1819
.OAAAF CWEK=1823
.OAAAG NWEK=18nn
.OAAAH PORD=18
.OAAAI CORD=19
.OAAAJ NORD=20
.OAAAA RSU_id=1806
.OAAAK TZ_name=23T1
.OAAAL TZ_name_old=23DB
.OAAAM zOS_sysname=TST1
.OAAAN zOS_sysname_old=DEVB
***** Bottom of Data *****
```



LET'S RUN OUR RSU WORKFLOW

z/OSMF Workflow: Create a WorkFlow

Welcome x Workflows x

Workflows

Simplifies tasks through guided step-based workflows, and provides administrative functions for assigning workflow responsibilities and tracking progress.

Actions ▾ Active ▾

View Properties

Open

Modify...

Cancel

Delete

Archive

Stop Automation

Generate Feedback Summary

Create New Based on Existing

Reactivate...

Update Workflow Steps

Create Workflow...

Customize JOB Statement

Workflows View ▸

☒ Select All

☐ Deselect All

Configure Columns...

Hide Filter Row

Clear Sorts

Workflow	Version Filter	Vendor Filter	Access Filter	Owner does not equal "rerobb"	System Filter
new instance of pre-G.A. z/OS image	1.1	SAS Mainframe Support	Public	snosew	DEVAPLEX.DEVT (DEVT)
new instance of pre-G.A. z/OS image	1.1	SAS Mainframe Support	Public	vinuge	DEVAPLEX.DEVA (LOCAL)
_v2r3	1.0	IBM	Public	vinuge	DEVAPLEX.DEVT (DEVT)
new instance of pre-G.A. z/OS image	1.1	SAS Mainframe Support	Public	vinuge	DEVAPLEX.DEVT (DEVT)
Maintenance for z/OS TST1 system	1.3	SAS IT Mainframe	Public	vinuge	DEVAPLEX.DEVT (DEVT)
ACF User with TSO and z/OS Unix attributes	1.1	SAS IT Mainframe	Public	snosew	DEVAPLEX.DEVT (DEVT)
Maintenance for z/OS DEVT system	1.3	SAS IT Mainframe	Public	vinuge	DEVAPLEX.DEVA (LOCAL)
Maintenance for z/OS DEVB system	1.3	SAS IT Mainframe	Public	vinuge	DEVAPLEX.DEVT (DEVT)
Maintenance for z/OS TST1 system	1.3	SAS IT Mainframe	Public	vinuge	DEVAPLEX.DEVT (DEVT)
Maintenance for z/OS SRVP system	1.3	SAS IT Mainframe	Public	vinuge	DEVAPLEX.DEVT (DEVT)

z/OSMF Workflow: Create a Workflow

Select Definition Files and Execution System

Create Workflow

Type or select a workflow definition file to use for creating a new workflow.
For a z/OS data set, specify a fully qualified name, with no quotes.

* Workflow definition file:

/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.xml

Type or select a variable input file to populate the new workflow. For a z/OS data set, specify a fully qualified name, with no quotes.

Workflow variable input file:

/u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/\$RECEIVE.varfile

* System:

DEVAPLEX.DEVA (LOCAL)

< Back Next > Finish Cancel Help

z/OSMF Workflow: Create a Workflow

Create Workflow

/u/snosew/zOSMF_Workflows/RSUz...3/RSU1806/RECEIVE/\$RECEIVE.xml

Variable input file:
/u/snosew/zOSMF_Workflows/RSUz...U1806/RECEIVE/\$RECEIVE.varfile

Description:
RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Vendor:
SAS IT IE Mainframe

Version:
1.10

Is Callable: ⓘ
Cannot be called by another workflow

* Workflow name:

RECEIVE ALL RSU Service To Date

* Owner user ID:

snosew

System:
DEVAPLEX.DEVA (LOCAL)

Comments:

* Access([Learn More](#)):

Public

☒ Open workflow on finish

☐ Assign all steps to owner user ID

< Back

Next >

Finish

Cancel

Help

z/OSMF Workflow: Create a Workflow

Alter Name if Desired

Create Workflow

Workflow definition file:

/u/snosew/zOSMF_Workflows/RSUz...3/RSU1806/RECEIVE/\$RECEIVE.xml

Variable input file:

/u/snosew/zOSMF_Workflows/RSUz...U1806/RECEIVE/\$RECEIVE.varfile

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Vendor:

SAS IT IE Mainframe

Version:

1.10

Is Callable: 

Cannot be called by another workflow

* Workflow name:

RECEIVE ALL RSU1806|Service To Date

z/OSMF Workflow: Create a WorkFlow

Select Actions like Open or Assign Owner

* Workflow name:

* Owner user ID:

System:
DEVAPLEX.DEVA (LOCAL)

Comments:

* Access([Learn More](#)):

☒ Open workflow on finish ☐ Assign all steps to owner user ID

z/OSMF Workflow: The RECEIVE WorkFlow

Ready to Assign Steps to Users

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be cal
workflow

Workflow Steps

Actions ▾							
↔ No filter applied							
☐	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☐	Unassigned	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No		Systems Programmer
☐	Unassigned	2	■ RECEIVE Security Holddata and Assigns		No		Systems Programmer
☐	Unassigned	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No		Systems Programmer
☐	Unassigned	4	■ RECEIVE Generating Jobs to APPLY RSU Service		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Select Steps to be Assigned

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be call
workflow

Workflow Steps

Actions ▾							
↔ No filter applied							
☒	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☒	Unassigned	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No		Systems Programmer
☒	Unassigned	2	■ RECEIVE Security Holddata and Assigns		No		Systems Programmer
☒	Unassigned	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No		Systems Programmer
☒	Unassigned	4	■ RECEIVE Generating Jobs to APPLY RSU Service		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Under Actions, go to Add Assignees

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be called by :
workflow

Workflow Steps

Actions ▾

Properties

Accept

Perform

Skip

Status

Override Complete

Resolve Conflicts

Change Called Workflow

Assignment And Ownership ▸

FeedBack

Expand

Collapse

Select All Steps Assigned to Me

Add Assignees...

Remove Assignees...

Return

Take Ownership

Request Assignment

	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
RECEIVE RSU PTFs via SMP/E Internet		No		Systems Programmer
RECEIVE Security Holddata and Assigns		No		Systems Programmer
RECEIVE Simulate Generating Jobs to RSU Service		No		Systems Programmer
RECEIVE RSU Service		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Select User to Assign to Selected Steps

[Workflows](#) ▶ [RECEIVE ALL RSU1806 Service To Date](#) ▶ Add Assignees

Add Assignees

Select one or more SAF user IDs, SAF groups or z/OSMF roles to be assigned to the selected steps.

▶ Selected Steps

Available assignees

Actions ▾		
↕ No filter applied		
☐	Name Filter	Type Filter
☐	rerobb	SAF user ID
☒	snosew	SAF user ID

Add >

Add All >>

< Remove

<< Remove All

Total: 9 Selected: 1

Comments:

☒ Send z/OSMF notifications to assignees (comments are not included on notifications)

OK Cancel

z/OSMF Workflow: The RECEIVE WorkFlow

Add Selected User to Assignees to Add

[Workflows](#) ▶ [RECEIVE ALL RSU1806 Service To Date](#) ▶ Add Assignees

Add Assignees

Select one or more SAF user IDs, SAF groups or z/OSMF roles to be assigned to the selected steps.

▶ Selected Steps

Available assignees

Actions ▾			
↕ No filter applied			
☐	Name Filter	Type Filter	
☐	rerobb	SAF user ID	
☒	sno sew	SAF user ID	

Total: 9 Selected: 1

Add >
Add All >>
< Remove
<< Remove All

* Assignees to be added:

sno sew

Comments:

☐ Send z/OSMF notifications to assignees (comments are not included on notifications)

OK

Cancel

z/OSMF Workflow: The RECEIVE WorkFlow Steps are Assigned but no Owner

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

sno sew

System:

DEVAPLEX.DEVA
(LOCAL)

is capable.

Cannot be call
workflow

Workflow Steps

Actions ▾							
↔ No filter applied							
☐	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☐	➡ Assigned	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No		Systems Programmer
☐	➡ Assigned	2	■ RECEIVE Security Holddata and Assigns		No		Systems Programmer
☐	➡ Assigned	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No		Systems Programmer
☐	➡ Assigned	4	■ RECEIVE Generating Jobs to APPLY RSU Service		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Select Steps for Actions

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be c
workflow

Workflow Steps

Actions ▾							
🔗 No filter applied							
☒	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☒	➡ Assigned	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No		Systems Programmer
☒	➡ Assigned	2	■ RECEIVE Security Holddata and Assigns		No		Systems Programmer
☒	➡ Assigned	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No		Systems Programmer
☒	➡ Assigned	4	■ RECEIVE Generating Jobs to APPLY RSU Service		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Accept Assignment to become Owner

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

snosew

DEVAPLEX.DEVA
(LOCAL)

Cannot be call
workflow

Workflow Steps

Actions ▾				
Properties				
Accept				
Perform				
Skip				
Status				
Override Complete				
Resolve Conflicts				
Change Called Workflow				
Assignment And Ownership				
FeedBack				
	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
E RSU PTFs via SMP/E Internet al		No		Systems Programmer
E Security Holddata and Assigns		No		Systems Programmer
E Simulate Generating Jobs to RSU Service		No		Systems Programmer
E Generating Jobs to APPLY RSU		No		Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow With Owner, Steps are Ready to be Run

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be ca
workflow

Workflow Steps

Actions ▾							
🔍 No filter applied							
☒	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☒	➡ Ready	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No	snosew	Systems Programmer
☒	➡ Ready	2	■ RECEIVE Security Holddata and Assigns		No	snosew	Systems Programmer
☒	➡ Ready	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No	snosew	Systems Programmer
☒	🚫 Not Ready	4	■ RECEIVE Generating Jobs to APPLY RSU Service		No	snosew	Systems Programmer

z/OSMF Workflow: The RECEIVE WorkFlow

Perform Each Step

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

sno sew

System:

DEVAPLEX.DEVA
(LOCAL)

Workflow Steps

Actions ▾			
Properties			
Accept			
Perform			
Skip			
Status			
Override Complete			
Resolve Conflicts			
Change Called Workflow			
Assignment And Ownership			
FeedBack			

	CalledWorkflow Filter	Automated Filter	Owner Filter
E RSU PTFs via SMP/E Internet		No	sno sew
E Security Holddata and Assigns		No	sno sew
E Simulate Generating Jobs to RSU Service		No	sno sew
E Generating Jobs to APPLY RSU		No	sno sew

z/OSMF Workflow: The RECEIVE WorkFlow May Be Prompted to Confirm Variables

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
✓ Input Variables ➔ General Review Instructions Create JOB statement Review JCL Submit and Save JCL Input Variables - General Enter the variable values for this input category. * New_RSU: ⓘ - New RSU number. 1806 * New Order: ⓘ - New SMP/E Order Number. 20 < Back Next > Save Finish Cancel							

z/OSMF Workflow: The RECEIVE WorkFlow

Review Instructions and Click Next When Ready

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
✓ Input Variables ✓ General ➔ Review Instructions Create JOB statement Review JCL Submit and Save JCL Review Instructions To proceed with the guided path through creating and submitting the JCL on DEVAPLEX.DEVA (LOCAL), click Next. Or, you can choose so, first review and confirm that the instructions below are complete. Then, click Finish to mark the step complete. Instructions: Received RSU1806 SYSMODs and HOLDDATA into z/OS V2R3 Gzone using SMP/E Internet Service Retrieval; nnn PTFs RECEIVED. < Back Next > Save Finish Cancel							

z/OSMF Workflow: The RECEIVE WorkFlow

Review Default JOB Statement if Any

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
✓ Input Variables ✓ General ✓ Review Instructions ➔ Create JOB statement Review JCL Submit and Save JCL Create JOB statement Specify the JOB statement to use for this job. You can accept the default or define a new JOB statement. * JOB statement JCL: List variables for substitution <pre>//R3U1806A JOB (,RA424),'MSD-ED WEBB',MSGCLASS=F, // TIME=(09,59),GROUP=SYS1,LINES=90, // NOTIFY=&SYSUID.RESTART=APCK.SMP //DEFAULT OUTPUT DEFAULT=YES,JESDS=ALL,OUTDISP=(HOLD,HOLD) /*XEQ S390DEVA</pre> Undo All Changes View Substitutions Apply updates to: ☐ All steps in workflow 'RECEIVE ALL RSU1806 Service To Date'. ☐ This step 'RECEIVE RSU PTFs via SMP/E Internet Retrieval' only. < Back Next > Save Finish Cancel							

z/OSMF Workflow: The RECEIVE WorkFlow

Review JCL

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
---------	---------	--------------	-------	----------------	--------	-----------------	----------

✓ Input Variables

✓ General

✓ Review Instructions

✓ Create JOB statement

➡ **Review JCL**

Submit and Save JCL

Review JCL

Review the generated JCL, then click **Next** to proceed. Optionally, you can edit the JCL. To do so, click the **Edit JCL** button.

```
//R3U1806A JOB (,RA424),'MSD-ED WEBB',MSGCLASS=F,  
//          TIME=(09,59),GROUP=SYS1,LINES=90,  
//          NOTIFY=&SYSUID.RESTART=APCK.SMP  
//DEFAULT OUTPUT DEFAULT=YES,JESDS=ALL,OUTDISP=(HOLD,HOLD)  
/*XEQ S390DEVA  
/*JOBPARM SYSAFF=DEVA  
//*  
/* LIB: SSD.ZOSV2R03.CNTL(R3U1806A)  
/* DOC: Receive RSU1806 service via SMP/E Internet Service Retrieval.  
/*  
/* This job transfers the service package from the IBM server to  
/* your local system. Input within this job is case sensitive.  
/*  
//RECEIVE EXEC SMPEOR23
```

Edit JCL Maximum record length: ⓘ 80

< Back

Next >

Save

Finish

Cancel

z/OSMF Workflow: The RECEIVE WorkFlow

Edit JCL if a Change is Needed

Edit JCL

Review and edit the generated JCL as needed, then click **Next** to proceed.

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----8

```
//R3U1806A JOB (,RA424),'MSD-ED WEBB',MSGCLASS=F,  
//          TIME=(09,59),GROUP=SYS1,LINES=90,  
//          NOTIFY=&SYSUID. RESTART=APCK.SMP  
//DEFAULT OUTPUT DEFAULT=YES,JESDS=ALL,OUTDISP=(HOLD,HOLD)  
/*XEQ S390DEVA  
/*JOBPARM SYSAFF=DEVA  
//*  
/* LIB: SSD.ZOSV2R03.CNTL(R3U1806A)  
/* DOC: Receive RSU1806 service via SMP/E Internet Service Retrieval.  
//*  
/* This job transfers the service package from the IBM server to  
/* your local system. Input within this job is case sensitive.  
//*  
//RECEIVE EXEC SMPEOR23  
//SMP.SMPSNAP DD DUMMY  
//
```

Undo All Changes

Maximum record length: ⓘ 80

< Back

Next >

Save

Finish

Cancel

z/OSMF Workflow: The RECEIVE WorkFlow

JCL Template with Variables

```
VIEW          /u/snosew/zOSMF_Workflows/R3UzV2R3/R3U1806/RECEIVE/R3U1806A.template
Command ==>
***** Top of Data *****
000001 //R3U${instance-NRSU}A JOB
000002 /**
000003 /** LIB: SSD.ZOSV2R03.CNTL(R3U${instance-NRSU}A)
000004 /** DOC: Receive RSU${instance-NRSU} service via SMP/E Internet Service Retrieval.
000005 /**
000006 /** This job transfers the service package from the IBM server to
000007 /** your local system. Input within this job is case sensitive.
000008 /**
000009 //RECEIVE EXEC SMPEOR23
000010 //SMP.SMPSNAP DD DUMMY
000011 //SMP.D23SP1 DD DISP=OLD,UNIT=DISK,VOL=SER=D23SP1,RE,SURE,VOLSER ONLINE
```

```
VIEW          /u/snosew/zOSMF_Workflows/R3UzV2R3/R3U1806/RECEIVE/R3U1806A.template
Command ==>
000032      FORTGTZONES(TZ23SP)
000033      RECEIVE ORDER(PENDING(ORD000${instance-NORD}))
000034      CLIENT(SSLCLNT)
000035      ) BYPASS(APPLYCHECK)
000036      /*      DELETEPKG      /* <=== NOTE 4 */
000037      .
000038 //SMP.IGNORE2 DD *
000039      RECEIVE FROMNTS(ORDER(ORD000${instance-NORD})) BYPASS(APPLYCHECK)
000040      /*      DELETEPKG      /* <=== NOTE 4 */
000041      .
```

z/OSMF Workflow: The RECEIVE WorkFlow Almost Ready to Submit JOB

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
✓ Input Variables ✓ General ✓ Review Instructions ✓ Create JOB statement ✓ Review JCL ➔ Submit and Save JCL Submit and Save JCL Select whether to submit the JCL or save it, and then click Finish. ☒ Submit JCL ☐ Save JCL ☒ z/OS UNIX file. Specify the full path, including the file name: /u/snosew/zOSMF_Workflows/RSUZV2R3/RSU1806/RECEIVE/R3U1806A.wfjob ☐ z/OS data set. Specify an existing data set, including the member name if applicable: Volume serial (if the data set is not cataloged). ☐ Overwrite the file or member if it exists already. Restore Default Location < Back Next > Save Finish Cancel							

z/OSMF Workflow: The RECEIVE WorkFlow

Let's Save the Actual JCL Submitted

Workflows ▶ RECEIVE ALL RSU1806 Service To Date ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback
✓ Input Variables ✓ General ✓ Review Instructions ✓ Create JOB statement ✓ Review JCL ➔ Submit and Save JCL Submit and Save JCL Select whether to submit the JCL or save it, and then click Finish. ☒ Submit JCL ☒ Save JCL ☒ * z/OS UNIX file. Specify the full path, including the file name: /u/snosew/zOSMF_Workflows/RSUzV2R3/RSU1806/RECEIVE/R3U1806A.wfjob ☐ z/OS data set. Specify an existing data set, including the member name if applicable: Volume serial (if the data set is not cataloged). ☐ Overwrite the file or member if it exists already.							

z/OSMF Workflow: The RECEIVE WorkFlow JOB Submitted and on the Input Queue

Welcome x

Workflows x

[Workflows](#) ▶ [RECEIVE ALL RSU1806 Service To Date](#) ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval [Help](#)

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General

Details

Dependencies

Notes

Perform

Status

Input Variables

Feedback

Name:	ID:	Class:	Type:	Status:	Return code:
R3U1806A	J0856809	A	JOB	INPUT	

Refresh

Last refresh: Aug 8, 2018, 3:15:19 PM local time (Aug 8, 2018, 7:15:19 PM GMT)

Close

z/OSMF Workflow: The RECEIVE WorkFlow

Refreshed Status, JOB Ended with JCL Error

[Workflows](#) ▶ [RECEIVE ALL RSU1806 Service To Date](#) ▶ 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

[Help](#)

Properties for Workflow Step 1. RECEIVE RSU PTFs via SMP/E Internet Retrieval

General	Details	Dependencies	Notes	Perform	Status	Input Variables	Feedback												
Name:	ID:	Class:	Type:	Status:	Return code:														
R3U1806A	J0856809	A	JOB	OUTPUT	JCL ERROR														
JESMSG LG JESJCL JESYSMSG <table border="1"><thead><tr><th>DD name:</th><th>Step name:</th><th>Procedure step name:</th><th>Dataset ID:</th><th>Class:</th><th>Record count:</th></tr></thead><tbody><tr><td>JESMSG LG</td><td>JES2</td><td></td><td>2</td><td>F</td><td>11</td></tr></tbody></table> Output (0.484KB of 0.484KB shown) <pre>1 J E S 2 J O B L O G -- S Y S T E M D E V T -- N O D E S 3 9 0 D E V A 0 15.15.19 J0856809 ---- WEDNESDAY, 08 AUG 2018 ---- 15.15.19 J0856809 IRRO10I USERID SNOSEW IS ASSIGNED TO THIS JOB. 15.15.20 J0856809 IEFC452I R3U1806A - JOB NOT RUN - JCL ERROR 459 0----- JES2 JOB STATISTICS ----- 0 63 CARDS READ</pre> Refresh Last refresh: Aug 8, 2018, 3:16:26 PM local time (Aug 8, 2018, 7:16:26 PM GMT) Close								DD name:	Step name:	Procedure step name:	Dataset ID:	Class:	Record count:	JESMSG LG	JES2		2	F	11
DD name:	Step name:	Procedure step name:	Dataset ID:	Class:	Record count:														
JESMSG LG	JES2		2	F	11														

z/OSMF Workflow: The RECEIVE WorkFlow Step Failed Because of JCL Error

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

[Help](#)

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

sno sew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be called by
another workflow

[Notes](#) | [History](#)

Contains

Parallel Steps:

No

Workflow Steps

Actions ▾							Search
↔ No filter applied							
☐	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter
☒	✗ Failed	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No	sno sew	Systems Programm
☐	➡ Ready	2	■ RECEIVE Security Holddata and Assigns		No	sno sew	Systems Programm
☐	➡ Ready	3	■ RECEIVE Simulate Generating Jobs to		No	sno sew	Systems Programm

Total: 4 Selected: 1

[Return to Workflows](#)

[Refresh](#)

Last refresh: Aug 8, 2018, 4:59:00 PM local time (Aug 8, 2018, 8:59:00 PM GMT)

z/OSMF Workflow: The RECEIVE WorkFlow Step Completed After Error Corrected

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

[Notes](#) |

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

snosew

System:

DEVAPLEX.DEVA
(LOCAL)

Is Callable:

Cannot be called by another
workflow

Contains Para
Steps:

No

Workflow Steps

Actions ▾								
↔ No filter applied								
☐	State Filter	No. Filter	Title Filter	CalledWorkflow Filter	Automated Filter	Owner Filter	Skill Category Filter	Assignees Filter
☒	✓ Complete	1	■ RECEIVE RSU PTFs via SMP/E Internet Retrieval		No	snosew	Systems Programmer	snosew
☐	➡ Ready	2	■ RECEIVE Security Holddata and Assigns		No	snosew	Systems Programmer	snosew
☐	➡ Ready	3	■ RECEIVE Simulate Generating Jobs to APPLY RSU Service		No	snosew	Systems Programmer	snosew

z/OSMF Workflow: Update Workflow or Steps

Workflows

Simplifies tasks through guided step-based workflows, and provides administrative functions for assigning workflow responsibilities

The screenshot displays the z/OSMF Workflows interface. At the top, there is a filter bar with 'Actions' and 'Active' dropdowns. Below this is a table of workflows. A context menu is open over the table, listing various actions. The table has columns for Name, Version, Vendor, Access, and Owner. The 'Owner' column for all visible rows is 'snosew'. The context menu includes options like 'View Properties', 'Open', 'Modify...', 'Cancel', 'Delete', 'Archive', 'Stop Automation', 'Generate Feedback Summary', 'Create New Based on Existing' (highlighted), 'Reactivate...', 'Update Workflow Steps', 'Create Workflow...', 'Customize JOB Statement', and 'Workflows View'.

Name	Version	Vendor	Access	Owner
Maintenance for z/OS TST1 system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS DEVT system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS DEVD system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS PROD system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS DEVA system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS DEVB system	1.4	SAS IT Mainframe	Public	snosew
Maintenance for z/OS SRVP system	1.4	SAS IT Mainframe	Public	snosew
ORDER for ALL RTEs through today for	1.10	SAS IT IE	Public	snosew

z/OSMF Workflow: Export as Printable Format

[Workflows](#) ▶ RECEIVE ALL RSU1806 Service To Date

RECEIVE ALL RSU1806 Service To Date

Description:

RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Owner:

sno sew

Step

System:

DEVAPLEX.DEVA
(LOCAL)

Workflow Steps

Actions ▾

Properties

Accept

Perform

Skip

Status

Override Complete

Resolve Conflicts

Change Called Workflow

Assignment And Ownership ▶

FeedBack

Expand

Collapse

Export Workflow as Printable Format

Select All Steps Assigned to Me

	CalledWorkflow Filter	Automated Filter	Owner Filter
PTFs via SMP/E Internet		No	sno sew
Security Holddata and Assigns		No	sno sew
Generate Generating Jobs to Service		No	sno sew
Generating Jobs to APPLY RSU		No	sno sew

z/OSMF Workflow: Export as Printable Format

RECEIVE ALL RSU1806 Service To Date

Description :RECEIVE ORDER for ALL PTFs through today for this z/OS release. Run some post-RECEIVE jobs as well.

Status: In Progress

Steps complete: 1 of 4

Owner: snosew

Export time: 2019-03-08 16:25:47

System: DEVAPLEX.DEVA (LOCAL)

Version: HSMA237;PH04817P;2018-12-01T00:17:16

Filters :

Contents

< Note: page numbers may not be accurate. >

Step 1 : RECEIVE RSU PTFs via SMP/E Internet Retrieval	2
Step 2 : RECEIVE Security Holddata and Assigns	4
Step 3 : RECEIVE Simulate Generating Jobs to APPLY RSU Service	5
Step 4 : RECEIVE Generating Jobs to APPLY RSU Service	8

Step 1 : RECEIVE RSU PTFs via SMP/E Internet Retrieval

Step State:	Step Owner:	Step Assignee:	Step Feedback:	Step Skills:	Has called workflow:
Complete	snosew	snosew	noFeedback	Systems Programmer	No

Description:

Received RSU1806 SYSMODs and HOLDDATA into z/OSV2R3 Gzone using SMP/E Internet Service Retrieval; nnn PTFs RECEIVED. RSU1806 included PUT/RSU1805 through PUT/RSU1806. SOURCEID automatically set to ORD00020 for these PTFs.

Instructions:

Received RSU1806 SYSMODs and HOLDDATA into z/OS V2R3 Gzone using SMP/E Internet Service Retrieval; nnn PTFs RECEIVED.

Template Content:

Workflow enhancements

- “Export workflow as printable format” supports
 - Cover
 - Frontmatter
 - Backmatter
 - Back cover

Export This Workflow in a Printable Format

Export workflow steps:

☐ All steps

☒ As filtered

Export Table of Contents:

☒ Include the Table of Contents

Export additional information:

☐ Include JCL, REXX, and UNIX shell contents from templates, and information from REST steps

☒ Include cover, frontmatter, backmatter and back cover

Logo:

Barcode:

OK Cancel Help

z/OSMF Workflows – Workflow Editor Recommendations

- Use templates for JCL, Avoid inline JCL
 - Originally only Unix files could be templates
 - Be sure APAR PH14185 is installed so you can exploit variables in the file name (z/OS 2.4 PTF is UI66738, z/OS 2.3 PTF UI66737)
 - Now z/OS data sets and members can be templates
- Set “Users can take ownership of steps automatically” when you start defining a workflow
- Use ISPF Edit ASCII (EA) in 3.17 for mass changes to a workflow, or
- Use the new z/OSMF VS-like Editor, or
- Use VS Studio or buy an editor that robustly supports xml formatting
- Don’t be afraid to try and fail, partial successes get you closer to your goal

z/OSMF Workflows – Workflow Editor

Pain Points

- WFE is still missing important functions
 - Samples of REST API invocations that could automate our RSU process even more
 - [IBM 219-013](#): “The Workflow Editor is planned to include a "toolbox" of IBM-supplied steps, which are designed for performing common tasks on z/OS, such as creating a data set or submitting a REST request.”
 - Variable substitution in Description and Title
 - Workflow Create should be able to set AutoTakeOwnership on or off.
 - Date of Workflow Creation
 - Undo for Complete or Skipped status
- A WFE Workflow compare function would be very helpful, or better yet, enhance ISPF Edit compare with ascii support.

z/OSMF Workflows - Conclusion



- The Workflows for our RSU process allowed less experienced Systems Programmers to do most of the maintenance on our z/OS systems.
- The Workflow Editor provided the method to define and revise our Workflows successfully.
- With the recent 2020 enablement of z/OSMF Software Management's Software Update application, our RSU APPLY workflow is probably Obsolete but the RECEIVE workflow is still required

Summary for z/OSMF updates in 2019

- z/OSMF continuous delivery in 1st half of 2019
 - Swagger support of z/OSMF REST APIs
 - Enhancements of Print Workflow
 - Support Workflow global variable group
 - z/OSMF Desktop UI supports search, browse, edit and create shortcut on desktop for data set
 - z/OSMF WLM performance enhancement
- z/OSMF V2R4 (Sep 2019)
 - z/OSMF Lite configuration
 - NEW Security Configuration Assistant task
 - NEW Diagnostic Assistant task
 - z/OSMF desktop UI enhancements
 - Support using certificate to logon to z/OSMF UI

- z/OSMF continuous delivery in 4Q 2019
 - Security Configuration Assistant supports group validation and variable substitution
 - Desktop UI supports
 - Browse/edit USS files and directories
 - Submit data set or uss file as JCL
 - Create data set member, uss file and directory
 - JWT support
 - Sysplex Management plugin supports creating new CDS
 - Workflow supports remote definition and using current logon user's credential
 - REST data set and file services supports remote sysplex

Swagger support of z/OSMF REST APIs

- **What is Swagger?**
 - *“Swagger is an open-source software framework backed by a large ecosystem of tools that helps developers design, build, document, and consume [RESTful Web services](#)” – From Wiki*
- **z/OSMF Swagger support allows users to**
 - Browse documents of z/OSMF REST API by connecting to any z/OSMF instance
[https:// <hostname>:<port>/zosmf/api/explorer/](https://<hostname>:<port>/zosmf/api/explorer/)
 - Try z/OSMF REST API without having to do any coding

Swagger support of z/OSMF REST APIs

[Filter](#)

z/OSMF REST APIs

Discover REST APIs for z/OSMF

AMS APIs

Console Services APIs

Dataset APIs

default

File APIs

Filesystem APIs

Information APIs

Jobs APIs

Notifications APIs

TSO/E APIs

Workflow APIs

default

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

File APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

Filesystem APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

Information APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

Jobs APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

GET	/zosmf/restjobs/jobs	List the jobs for an owner, prefix or job ID
PUT	/zosmf/restjobs/jobs	Submit a job
DELETE	/zosmf/restjobs/jobs/{correlator}	Cancel a job and purge its output
GET	/zosmf/restjobs/jobs/{correlator}	Obtain status of a job
PUT	/zosmf/restjobs/jobs/{correlator}	Hold, release, cancel a job, or change the job class
GET	/zosmf/restjobs/jobs/{correlator}/files	List spool files for a job
GET	/zosmf/restjobs/jobs/{correlator}/files/JCL/records	Retrieve the JCL for the specified job
GET	/zosmf/restjobs/jobs/{correlator}/files/{nnn}/records	Retrieve contents of a spool file
DELETE	/zosmf/restjobs/jobs/{jobname}/{jobid}	Cancel a job and purge its output
GET	/zosmf/restjobs/jobs/{jobname}/{jobid}	Obtain status of a job
PUT	/zosmf/restjobs/jobs/{jobname}/{jobid}	Hold, release, cancel a job, or change the job class
GET	/zosmf/restjobs/jobs/{jobname}/{jobid}/files	List spool files for a job
GET	/zosmf/restjobs/jobs/{jobname}/{jobid}/files/JCL/records	Retrieve the JCL for the specified job
GET	/zosmf/restjobs/jobs/{jobname}/{jobid}/files/{nnn}/records	Retrieve contents of a spool file

Notifications APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

TSO/E APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

Workflow APIs

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

Swagger support of z/OSMF REST APIs

Jobs APIs

GET /zosmf/restjobs/jobs

List the jobs for an owner, prefix, or job ID

Implementation Notes

You can use this operation to list the jobs for an owner, prefix, or job ID.

Response Class (Status 200)

On completion, the z/OS jobs REST interface returns an HTTP response with an array of matching jobs, each as a JSON job document.

Model Example Value

```
{
  "application/json": [
    {
      "jobid": "JOB000023",
      "jobname": "TESTJOB2",
      "subsystem": null,
      "owner": "IBUSER",
      "status": "OUTPUT",
      "type": "JOB",
      "class": "A",
    }
  ]
}
```

Response Content Type application/json

Parameters

Parameter	Value	Description	Parameter Type	Data Type
owner		User ID of the job owner whose jobs are being queried; the default is the z/OS user ID. Folded to uppercase; cannot exceed eight characters. Wildcard characters are permitted in the owner and prefix query parameter values. Use an asterisk (*) for multiple characters, and a question mark (?) for a single character.	query	string
user-correlator		The user portion of the job correlator. This value is 1 – 32 characters in length, where the first character must be uppercase alphabetic (A-Z) or special (\$, @). The remaining characters (up to 31) can be any combination of uppercase alphabetic, numeric (0-9), or special. Blank characters are not supported. This query parameter is mutually exclusive with jobid. This value is processed by the JES2 subsystem only; the JES3 subsystem does not process the correlator and, instead, indicates zero job matches. For a system with JES3 as the primary subsystem, and one or more JES2 secondary subsystems, the primary JES3 subsystem does not process the correlator, however, the JES2 secondary subsystems can process the correlator.	query	string

Try it out! Hide Response

Curl

curl -X GET --header 'Accept: application/json' 'https://pkstp00.pok.stglabs.ibm.com:1035/zosmf/restjobs/jobs?prefix*&max-jobs=1000'

Request URL

https://pkstp00.pok.stglabs.ibm.com:1035/zosmf/restjobs/jobs?prefix*&max-jobs=1000

Response Body

[]

Response Code

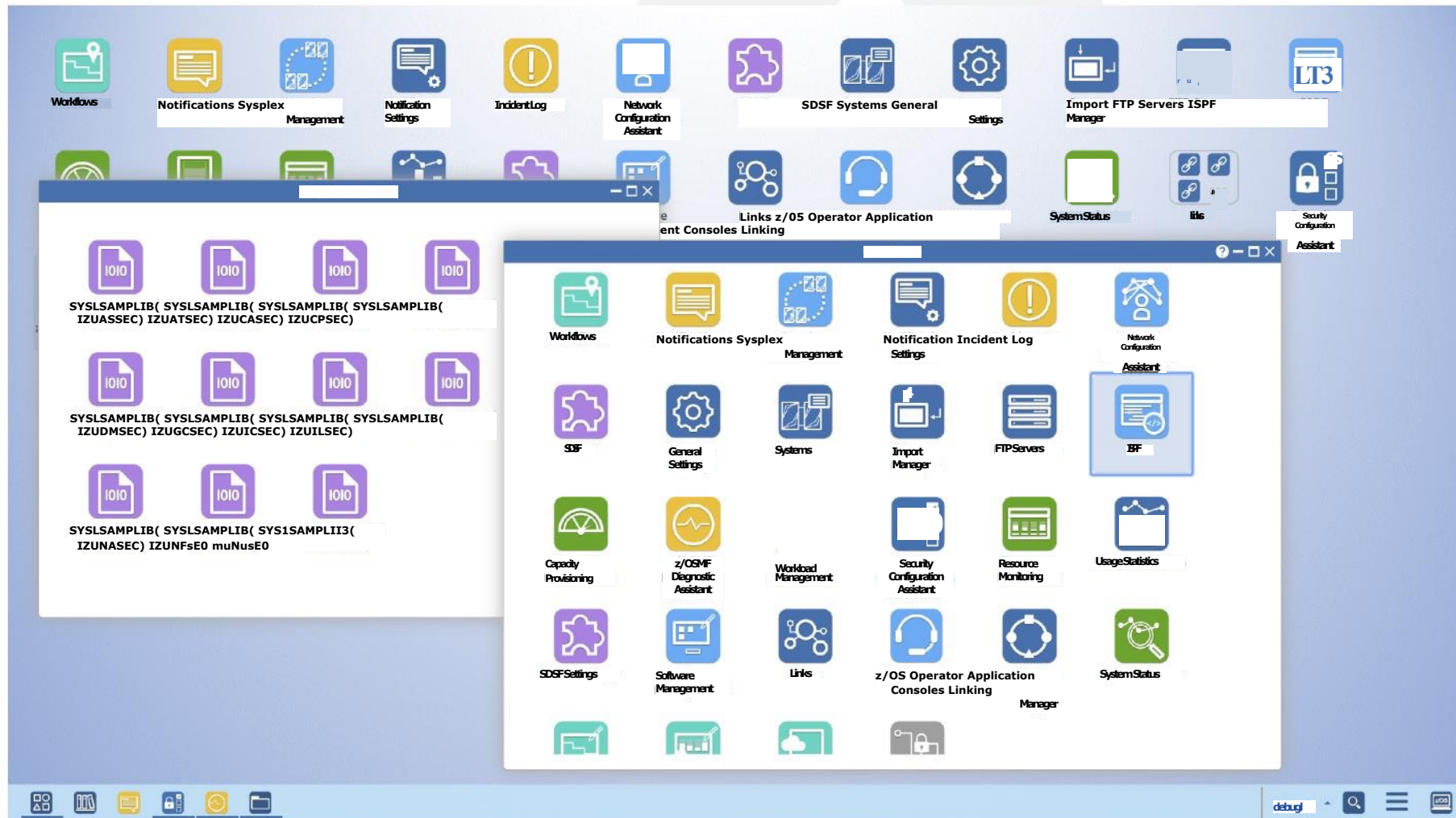
200

Response Headers

```
{
  "Cache-Control": "no-store",
  "Content-Language": "en-US",
  "Content-Type": "application/json",
  "Date": "Fri, 01 Mar 2019 14:10:36 GMT",
  "Pragma": "no-cache",
  "Strict-Transport-Security": "max-age=31536000; includeSubDomains",
  "Transfer-Encoding": "chunked",
  "X-Content-Type-Options": "nosniff",
  "X-Powered-By": "Servlet/3.1",
  "X-XSS-Protection": "1; mode=block"
}
```

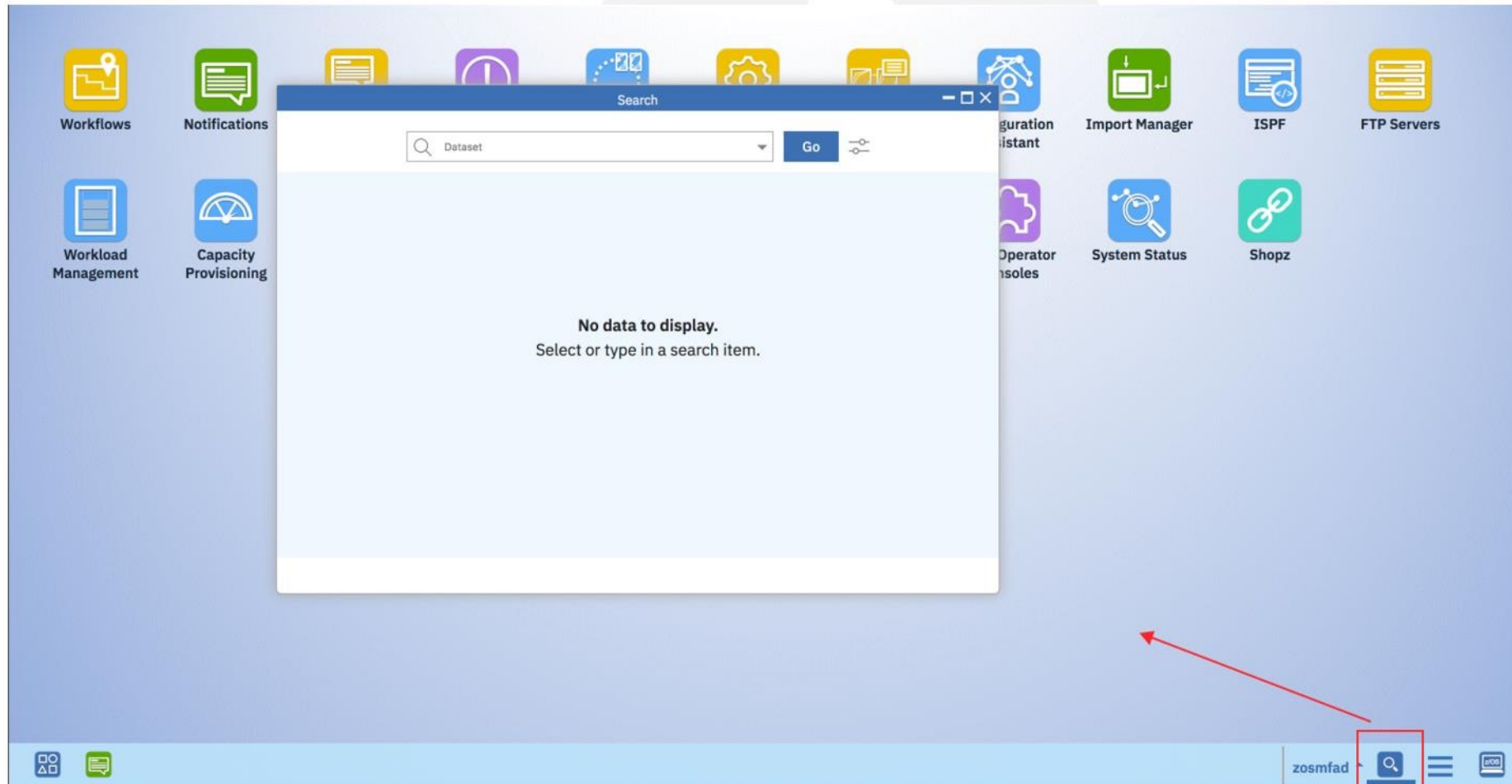
z/OSMF desktop UI enhancements

- Icons can be located by entering the first character of the icon name



z/OSMF Desktop UI enhancements

- Support searching data sets from z/OSMF desktop (1/2)



z/OSMF Desktop UI enhancements

- Support searching data sets from z/OSMF desktop (2/2)

The image displays three sequential screenshots of the z/OSMF Desktop UI search interface, illustrating enhancements for searching data sets.

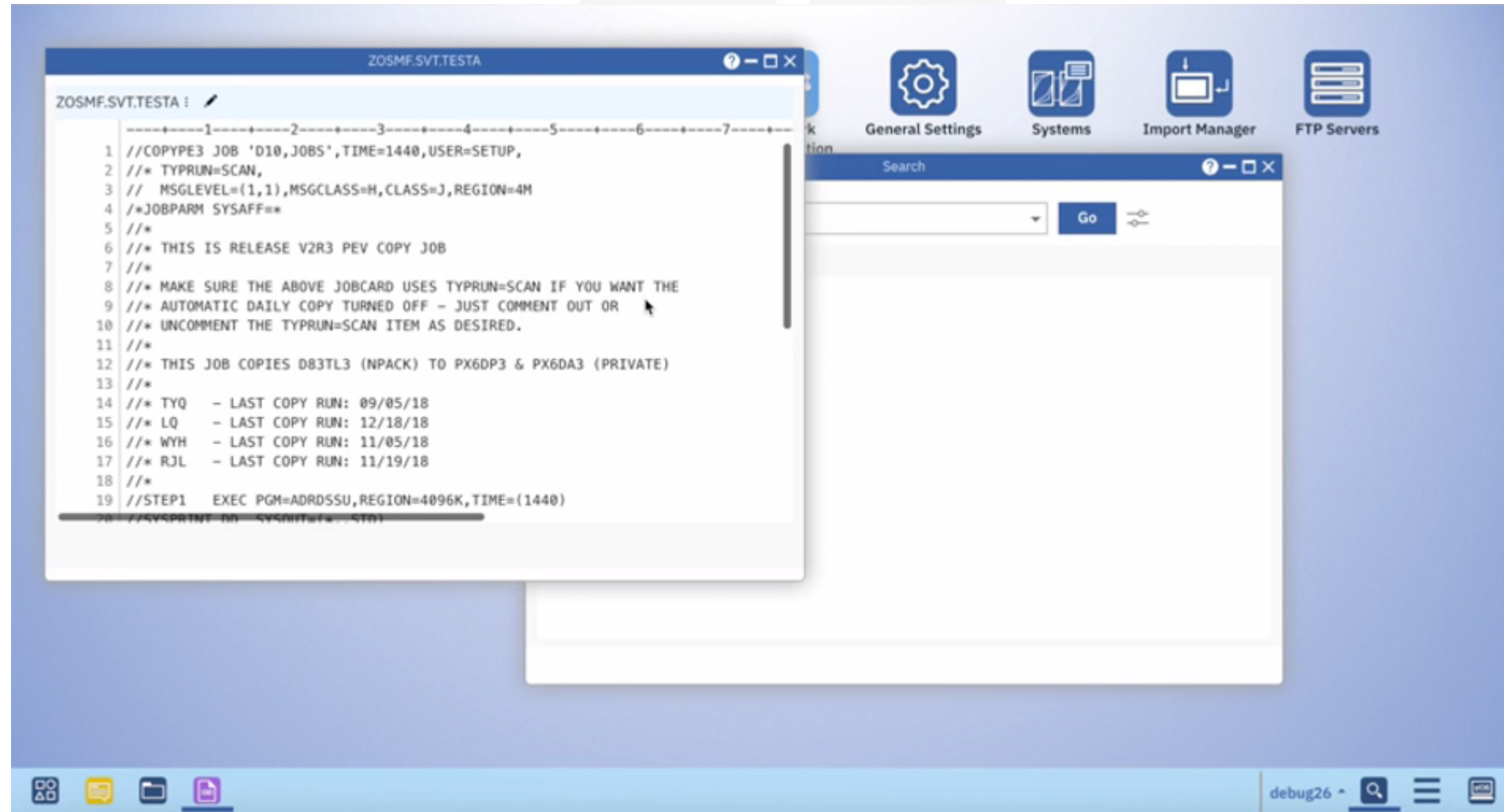
Left Screenshot: Shows the initial search state. The search bar contains the text "Dataset". Below the search bar, a list of suggestions is displayed: "dongm", "zosmf", "CIMSSRE.P*", "SYS1.PARM*", "SYS1.PARM", and "SYS1.P*". Below the suggestions, a message states: "No data to display. Select or type in a search item."

Middle Screenshot: Shows the search results for the query "SYS1.PARM*". The search bar contains "SYS1.PARM*". Below the search bar, the results are listed: "Results (6) :". The results are: ☐ SYS1.PARMLIB, ☐ SYS1.PARMLIB.CB, ☐ SYS1.PARMLIB.INSTALL, ☐ SYS1.PARMLIB.MSYS, ☐ SYS1.PARMLIB.PD, and ☐ SYS1.PARMLIB.POK.

Right Screenshot: Shows the search results for the query "SYS1.PARM*" with search options. The search bar contains "SYS1.PARM*". Below the search bar, the results are listed: "Results (3) :". The results are: ☐ SYS1.PARMLIB, ☐ SYS1.PARMLIB.INSTALL, and ☐ SYS1.PARMLIB.POK. To the left of the results, the search options are displayed: "Search Options:", "Volumn ZMR23B", and "X-IBM-Max-Items The maximum number of items to return".

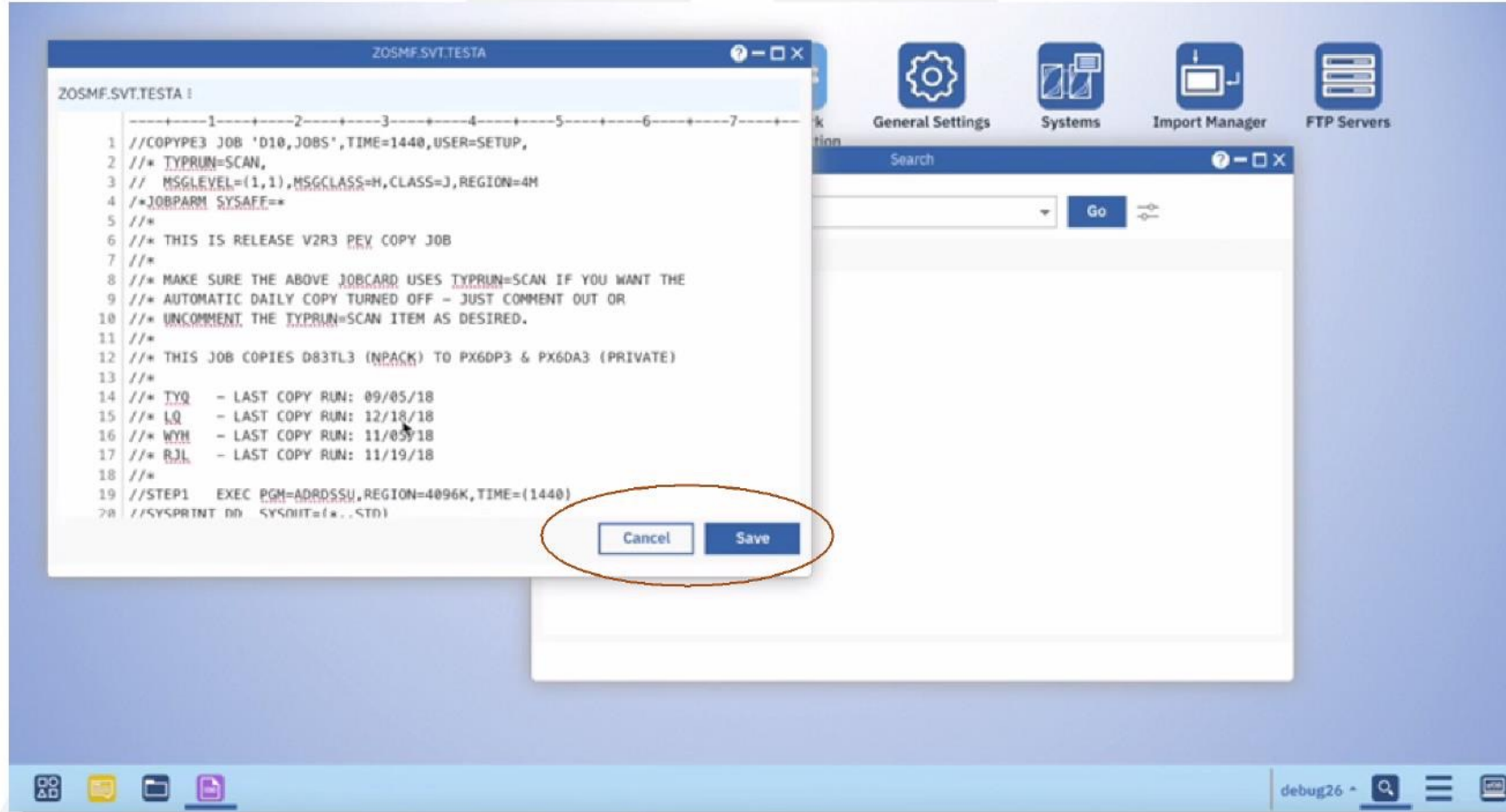
z/OSMF Desktop UI enhancements

- Click on data set name or member name to browse content of data set or data set member



z/OSMF Desktop UI enhancements

- Switch to edit mode



- **z/OS V2R4 was announced at July 23rd, 2019.**

The announcement can be accessed from z/OS home page (<https://www.ibm.com/it-infrastructure/z/zos>).

- **As part of z/OS, z/OSMF V2R4 provides**
 - **More simplified z/OSMF implementation and maintenance by**
 - **z/OSMF Lite configuration**
 - **NEW Security Configuration Assistant task**
 - **NEW z/OSMF Diagnostic Assistant task**
 - **Improved operational efficiency by**
 - **z/OSMF desktop UI enhancements**
 - **Support using certificate to logon to z/OSMF UI**
 - **Enhanced WTOR/HOLD message support in z/OSMF Console task**
 - **More flexible and powerful workflow engine by**
 - **Cross sysplex support**
 - **Support parallel execution of steps**
 - **Export workflow**
 - **Simplified management and installation of z/OS platform software by***
 - **Platform wide Portable Software Instance format**
 - **Integrated workflow for software configuration**

Blue: NEW functions in V2R4

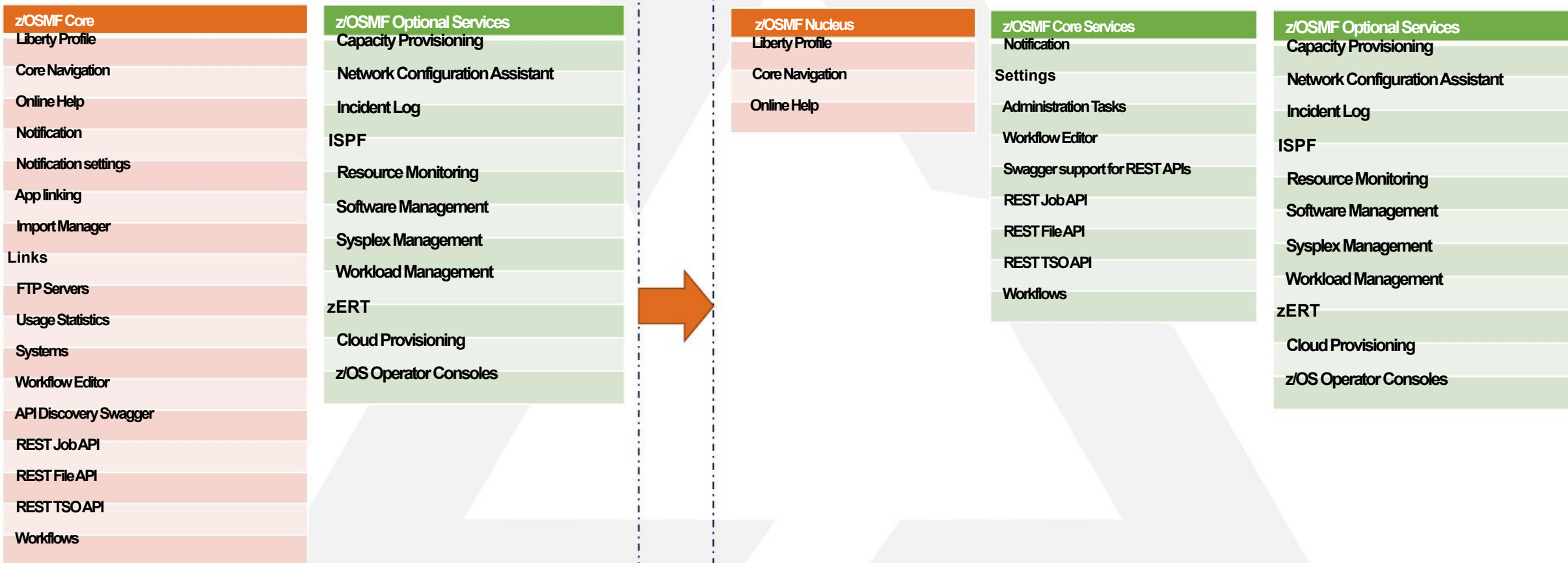
Black: Also available on V2R3 through continuous delivery

Session 27009: Installing IBM's ServerPac Using
z/OSMF Software Management
Room 202A, Thursday 11AM

z/OSMF Lite configuration

What's "z/OSMF Lite configuration"

Previous z/OSMF configuration z/OSMF Lite configuration



NEW Security Configuration Assistant task

- **What's Security Configuration Assistant (SCA)**

Security Configuration Assistant task is built for simplifying the user experience of security configuration and validation. It starts with help z/OSMF security configuration by providing

- Automatic validation of security configuration by user
 - Graphic views for validation result
 - Filter by validation result, service enablement status, etc.
 - Description for each security requirement
 - Support both RACF and non-RACF security products
-
- **SCA can be used in the following scenarios**
 - Security planning for z/OSMF
 - Validation of z/OSMF security configuration
 - Trouble shooting for function failures

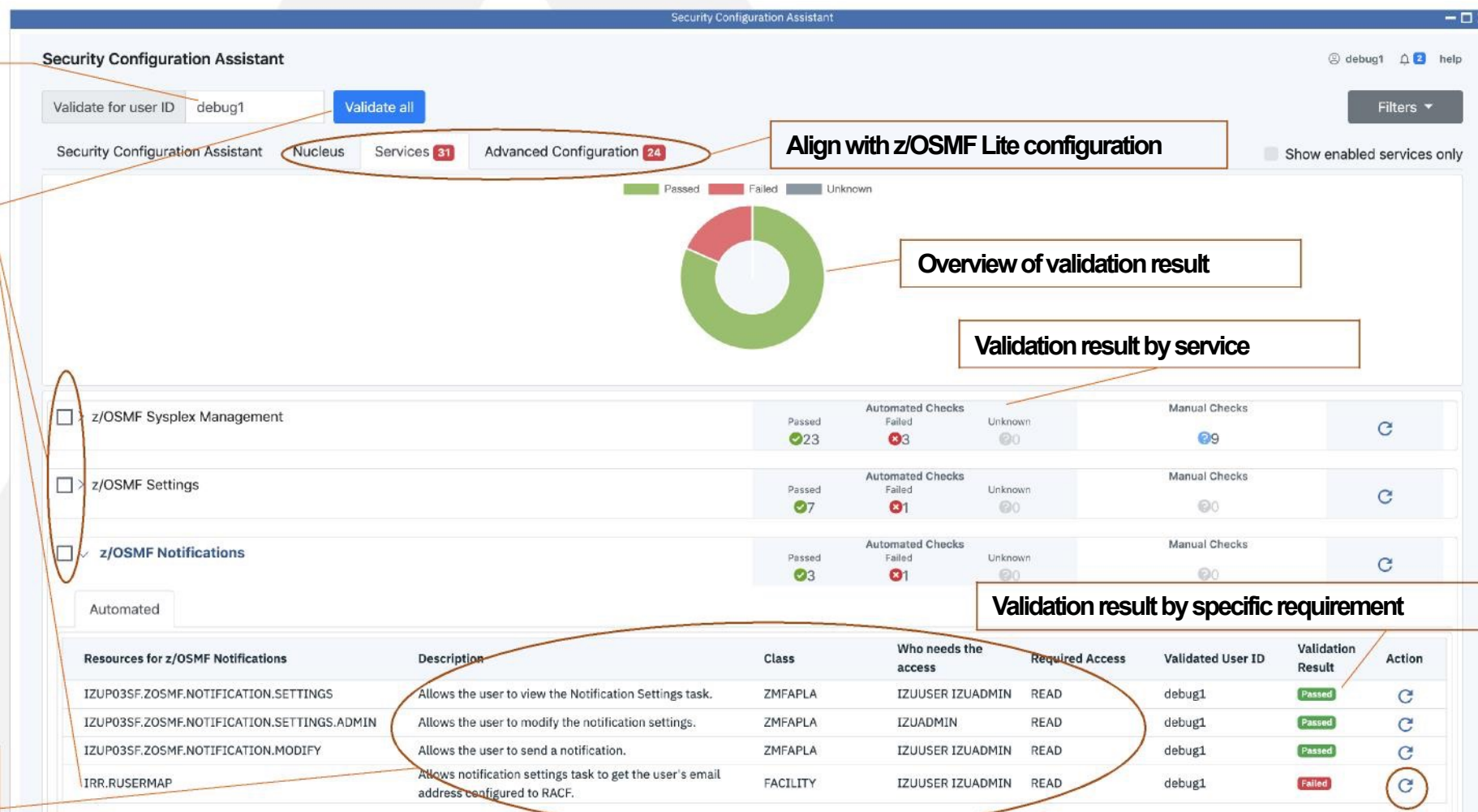
NEW Security Configuration Assistant task

- Security Configuration Assistant – Graphic view to display automatic validation result

Validation is done per user

Validation can be done against

- All z/OSMF security configuration
- Selected services
- One specific security requirement



Description is included for each security requirement

Enhancements of Security Configuration Assistant

- With PH17871, Security Configuration Assistant can do validation against user group

The screenshot shows the 'Security Configuration Assistant' interface. At the top, there's a 'Validate for ID' field containing 'ibmuser' and a 'Validate all' button. Below this are tabs for 'Security Configuration Assistant', 'Nucleus', 'Services' (with 11 items), and 'Advanced Configuration' (with 25 items). A bar chart displays validation results: 'Passed' (green), 'Failed' (red), 'Unknown' (grey), and 'Manual' (blue). The chart shows a high number of 'Passed' results for 'Automated' and 'Configurable' categories, and a few 'Manual' results. Below the chart, there's a section for 'Network Configuration Assistant' with a table of resources. The table has columns for 'Resources for Networking support for IBM Cloud Provisioning and Management for z/OS', 'Description', 'Class', 'Who needs the access', 'Required Access', 'Validated ID', 'Validation Result', and 'Action'. A tooltip is visible over the first row, stating: 'This profile contains variables without a value and cannot be validated.'

Resources for Networking support for IBM Cloud Provisioning and Management for z/OS	Description	Class	Who needs the access	Required Access	Validated ID	Validation Result	Action
MVS.ROUTE.CMD.<sysname>	Allows the Network Configuration Assistant task to issue the ROUTE operator command for IBM Cloud Provisioning and Management for z/OS. This definition is applicable only if the installation uses this profile to restrict the ROUTE command. If the ROUTE command is restricted, there must be one forceProfile for each system in each cloud in with the system name substituted for .	OPERCMDMS	IZUSVR	READ			

You can now enter group name as well

Bar chart replaced previous pie chart to be more straight forward

NEW z/OSMF Diagnostic Assistant task

- What's z/OSMF Diagnostic Assistant task

z/OSMF Diagnostic Assistant task is designed to simplify z/OSMF diagnostic experience. With current z/OSMF Diagnostic Assistant task, user can collect z/OSMF diagnostic data with 1 click in most cases.

The diagnostic data is download directly to client side as a zip file. The zip file could include:

- Most files under z/OSMF data directory which is /global/zosmf by default.
- z/OSMF server job log

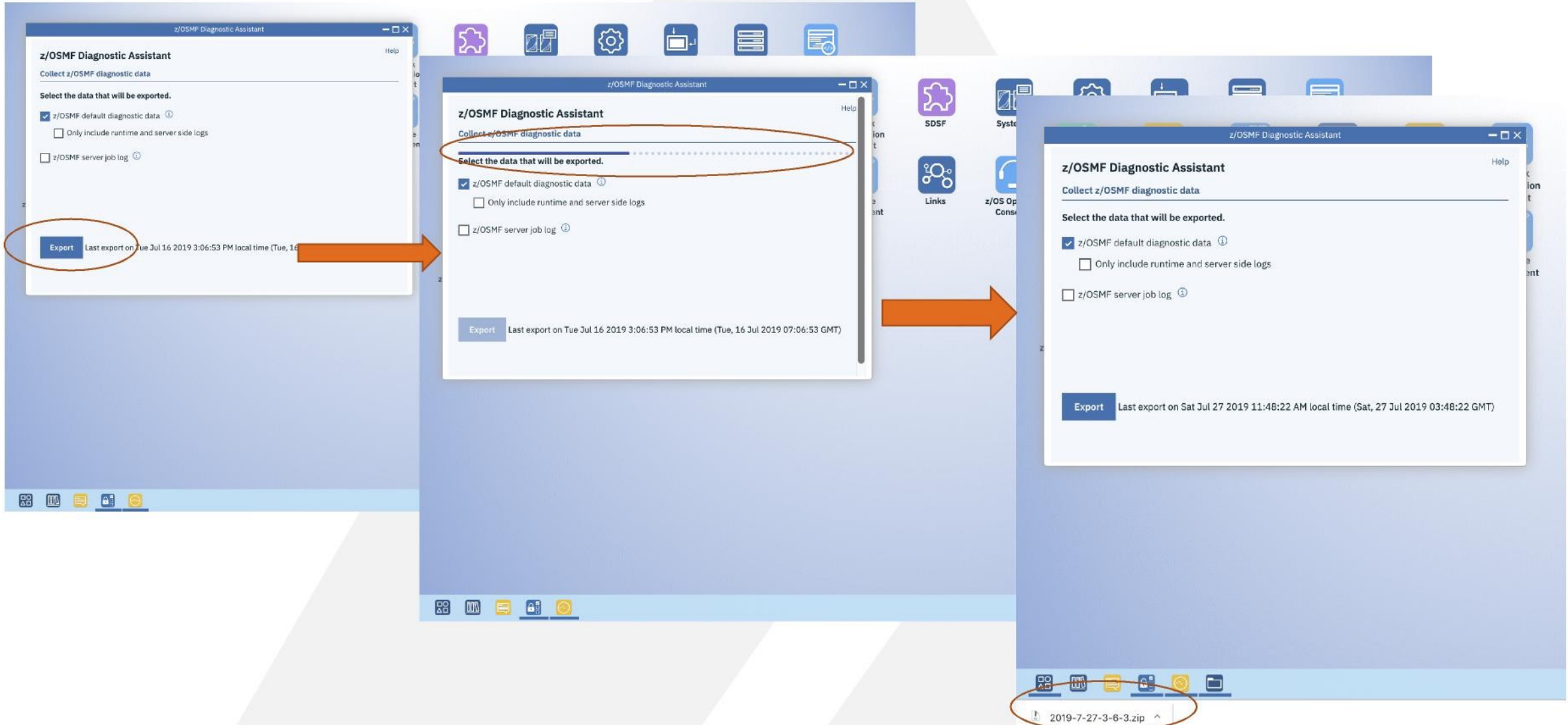
- How to enable z/OSMF Diagnostic Assistant task

User who needs to use z/OSMF Diagnostic Assistant task needs to have READ access to below resource:

<SAF_PREFIX>.ZOSMF.ADMINTASKS.DIAGNOSTIC_ASSISTANT Class(ZMFAPLA)

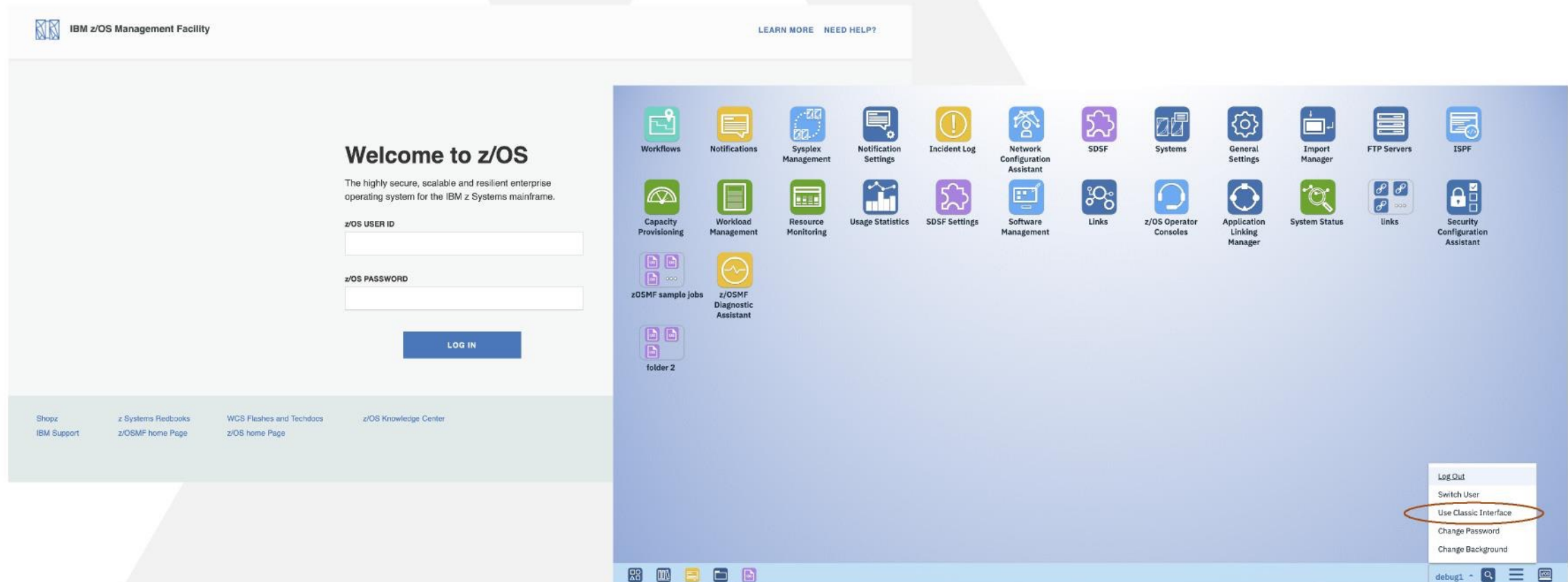
* IZUDFLT by default

NEW z/OSMF Diagnostic Assistant task



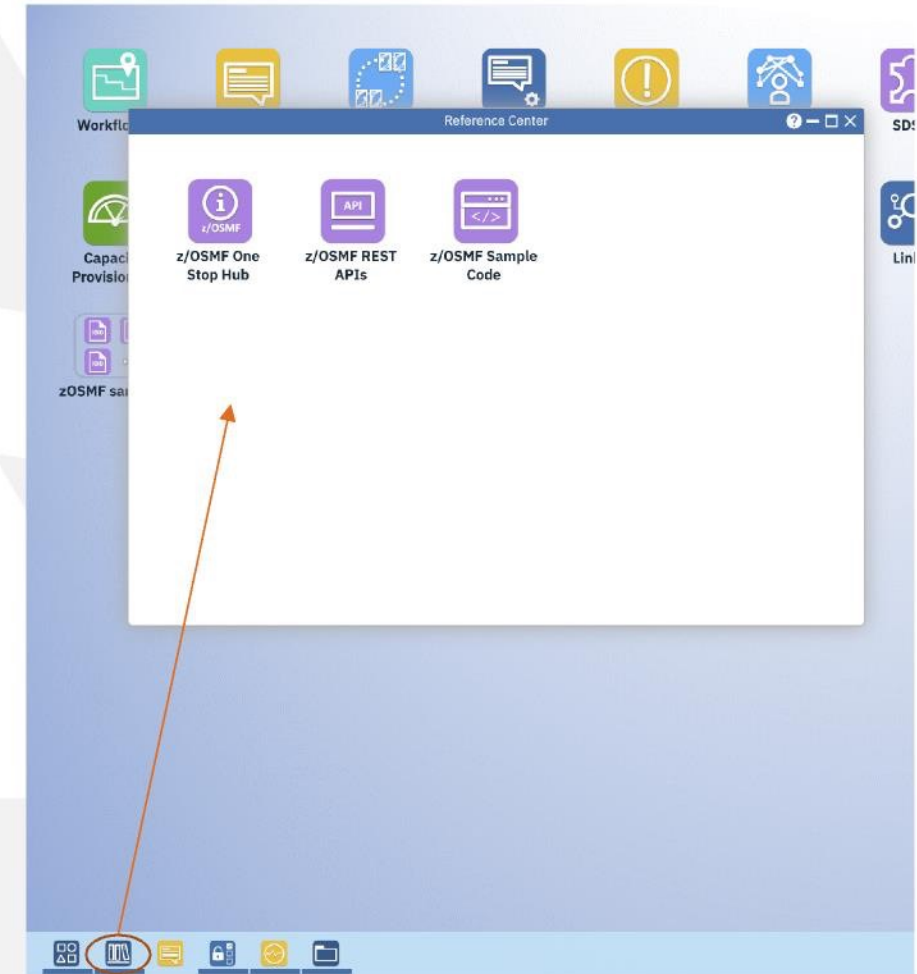
z/OSMF desktop UI enhancements

- Desktop interface is the default option since V2R4
 - The checkbox on z/OSMF logon page is removed in V2R4
 - User can still choose different UI options inside of z/OSMF UI



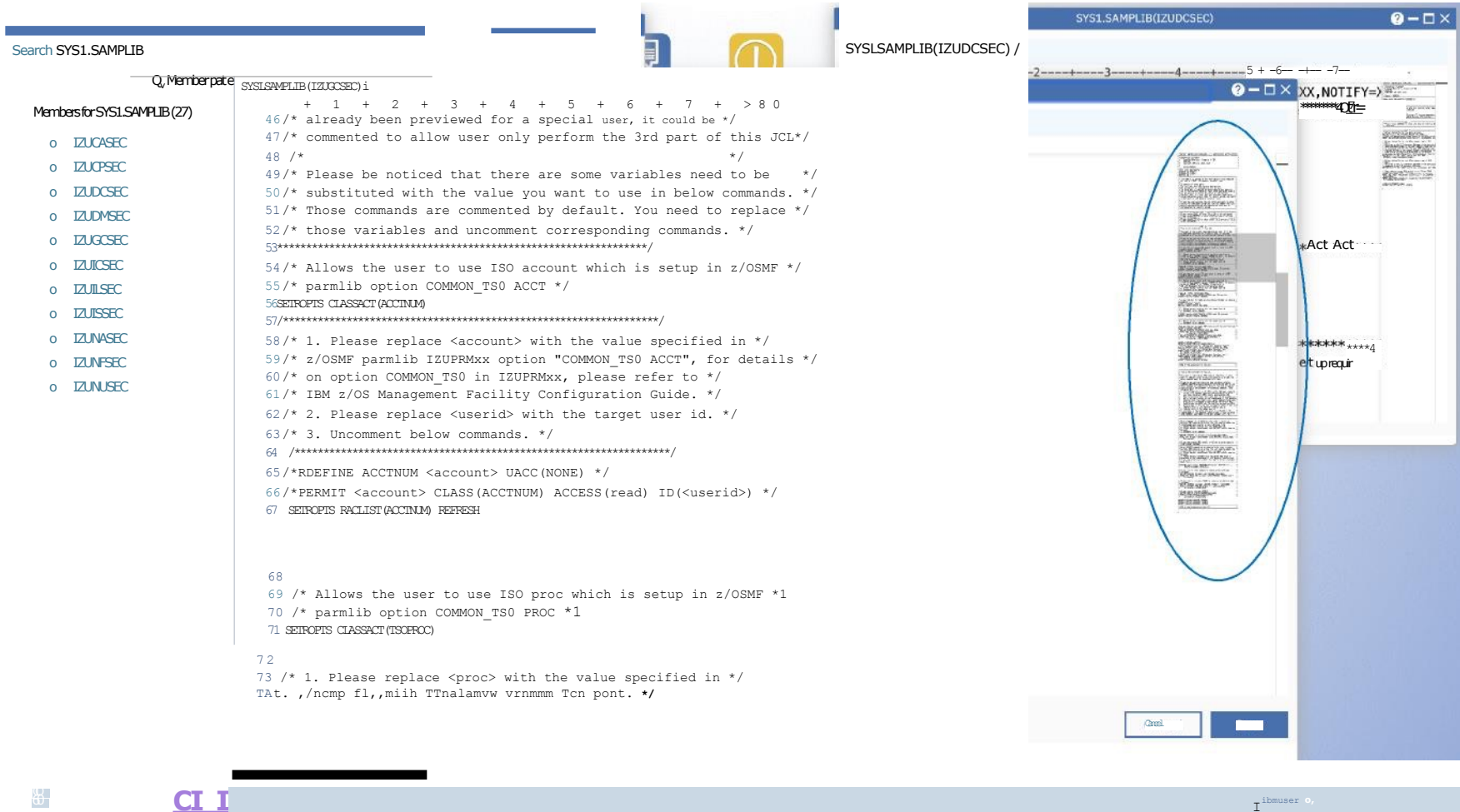
z/OSMF desktop UI enhancements

- A new icon “Reference Center” is added to z/OSMF task bar. Important z/OSMF links are added to this folder.
 - “z/OSMF One Stop Hub” where summarizes important z/OSMF information
 - “z/OSMF REST APIs” which opens OpenAPI document of most z/OSMF REST APIs
 - “z/OSMF Sample Code” which opens Git page of z/OSMF sample codes about
 - How to develop program to consume z/OSMF REST APIs
 - How to develop and deploy z/OSMF external plugins



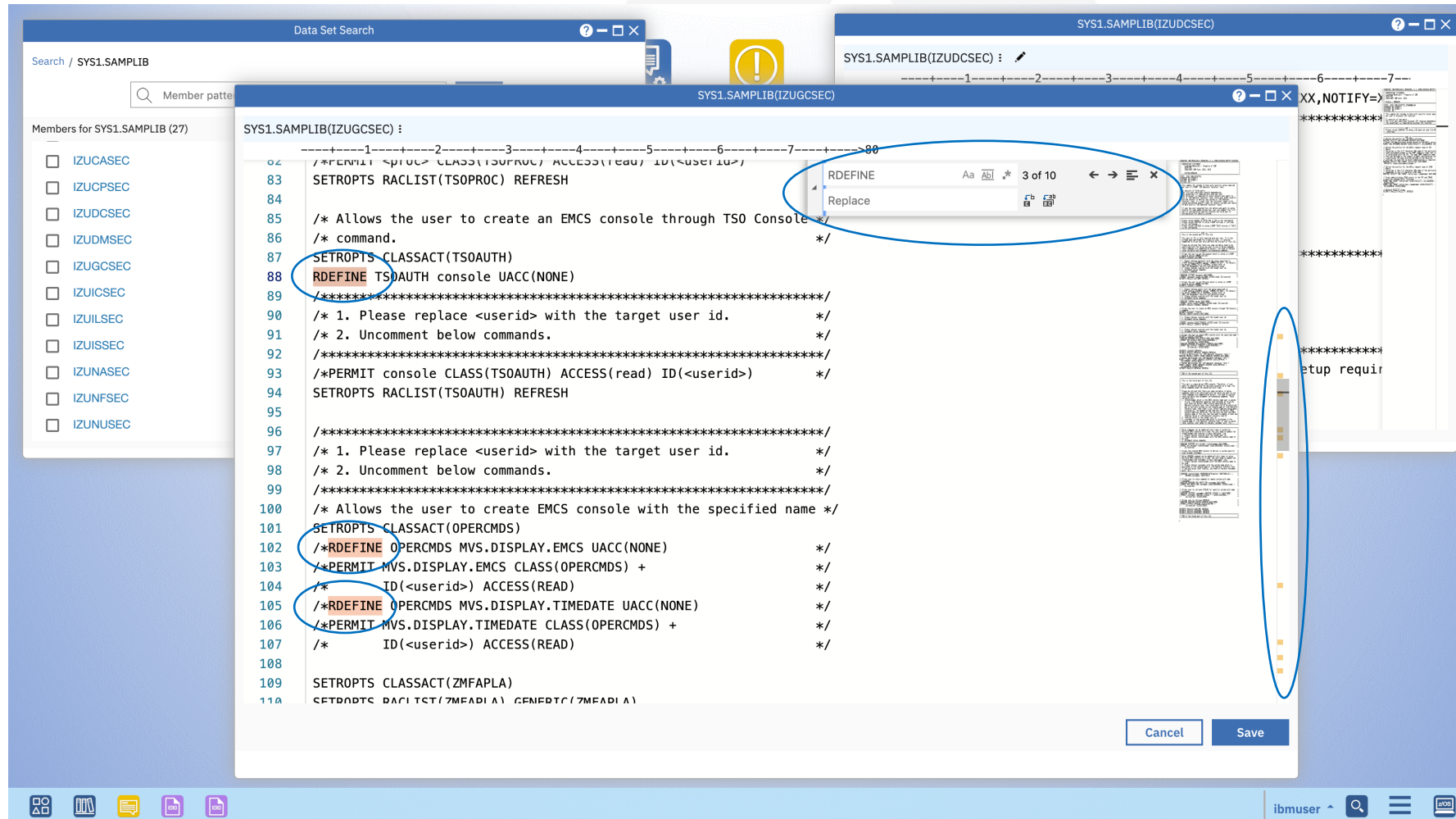
z/OSMF desktop UI enhancements

- New editor experience – Content preview (see APAR PH24190)



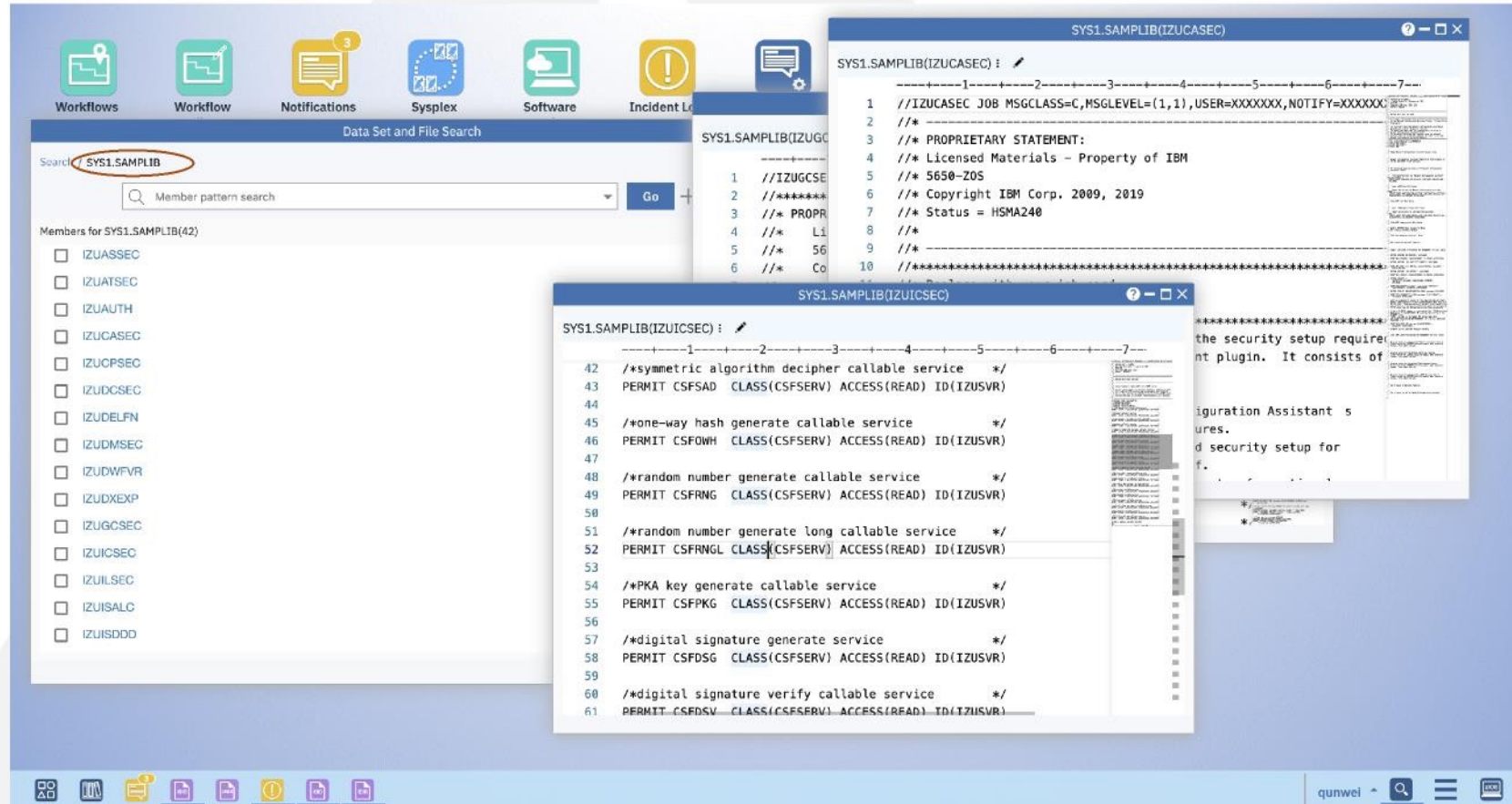
z/OSMF desktop UI enhancements

- New editor experience – Example: modernized search and replace experience



Enhancements of z/OSMF desktop UI

- Previously, the z/OSMF desktop UI supports search, browse and edit data set or data set members.



- With PH16076, z/OSMF desktop UI is enhanced to support USS file and directory as well

Enhancements of z/OSMF desktop UI

- Work with USS file and directory from z/OSMF desktop UI (1/2)

The screenshot displays the z/OSMF desktop UI. At the top, there is a navigation bar with icons for Workflows, Workflow Editor, Notifications, Sysplex Management, Software Services, and Incident Log. Below this, the 'Data Set and File Search' window is open, showing a search path of '/var/zosmf/data/logs'. The search results are displayed in a table with columns for Name, Mode, Size, and Modify Time. The table lists various log files, including IZUG0.log through IZUG9.log, zosmfLab, zosmfServer, and .classCache. To the right of the search window, a 'messages.log' file is open in a text editor, showing log entries with timestamps and error messages. The bottom of the screen features a taskbar with various application icons and a search bar.

Name	Mode	Size	Modify Time
☐ IZUG0.log	-rw-r----	275949	2020-02-17T02:38:07
☐ IZUG1.log	-rw-r----	2097414	2020-02-15T11:44:18
☐ IZUG2.log	-rw-r----	2097453	2020-02-03T16:22:38
☐ IZUG0.log.lck	-rw-r----	0	2020-02-03T08:56:47
☐ .pid	drwxrwx---	8192	2020-02-03T08:56:30
☐ IZUG3.log	-rw-r----	2100863	2020-01-14T16:25:50
☐ IZUG4.log	-rw-r----	2097721	2020-01-12T19:56:19
☐ IZUG5.log	-rw-r----	2097424	2020-01-12T15:52:19
☐ IZUG6.log	-rw-r----	2097424	2020-01-12T11:48:19
☐ IZUG7.log	-rw-r----	2097424	2020-01-12T07:44:18
☐ IZUG8.log	-rw-r----	2097424	2020-01-12T03:40:18
☐ IZUG9.log	-rw-r----	2097424	2020-01-11T23:36:18
☐ zosmfLab	drwxrwx---	8192	2019-12-03T15:26:34
☐ zosmfServer	drwxr-xr-x	8192	2019-10-17T16:04:32
☐ .classCache	drwxrwx--T	8192	2019-08-27T15:26:03

- Same search window and editor for both data set and USS file
- Breadcrumb helps navigating through directories
- Column header can be used to sort USS files and directories

Enhancements of z/OSMF desktop UI

- Submit JCL from Search window or editor (1/2)

- “Submit as JCL” opens a simple job output window for user to work with job outputs.
- The same editor can be used for viewing content of job output.

The screenshot displays the z/OSMF desktop interface. On the left, a sidebar shows a list of system members for 'SYS1.SAMPLIB', with 'IZUWMSEC' selected. The main area shows the 'Workflow Editor' for 'SYS1.SAMPLIB(IZUWMSEC)'. A context menu is open over the workflow, with the 'Submit as JCL' option highlighted. A blue arrow points from this option to the 'Job Output' window on the right. The 'Job Output' window shows the job 'IZUWMSEC_JOB14458' with a status of 'OUTPUT JOB'. Below the job details, the job output is displayed, showing a JES2 job log with various messages, including a 'SEC ERROR' and a 'JES2 JOB STATISTICS' section.

Workflow Editor: SYS1.SAMPLIB(IZUWMSEC)

```
1 //IZUWMSEC JOB
2 //*****
3 /** PROPRIETARY
4 /** License
5 /** 5650-Z05
6 /** Copyright IBM Corp. 2015, 2019
7 /**
8 /** STATUS=HSM240
9 /*******
10 //STEP1 EXEC PGM=IKJEFT01,DYNAMNBR=99
11 //SYSPRINT DD SYSOUT=*
12 //SYSPRINT DD SYSOUT=*
13 //SYSTSIN DD *
14
15 /*****
16 /* This sample JCL intends to help with security setup required
17 /* for z/OSMF Workload Management task.
18 /*
19 /* It consists of three parts:
20 /* Part 1 describes Workload Management dependencies on other
```

Job Output(IZUWMSEC_JOB14458)

My Jobs/IZUWMSEC(JOB14458) ...

Owner: Max - CC: XXXXXX
Status: SEC ERROR
Type: OUTPUT JOB

Job Data Sets JESMSG LG(2) X

```
1 1 JES2 JOB LOG -- SYSTEM
2 0
3 03.20.18 JOB14458 ---- MONDAY, 17 FEB 2020 ----
4 03.20.18 JOB14458 ICH408I USER(XXXXXX) GROUP( ) NAME
5 LOGON/JOB INITIATION - USER AT TERMINAL
6 03.20.18 JOB14458 IRR012I VERIFICATION FAILED. USER PROFILE
7 -$HASP106 JOB DELETED BY JES2 OR CANCELLED BY OPERATOR BEFORE
8 0----- JES2 JOB STATISTICS -----
9 0 133 CARDS READ
10 0 13 SYSOUT PRINT RECORDS
11 0 0 SYSOUT PUNCH RECORDS
```

Workflow enhancements

- Workflow supports reading workflow definition artifacts reside in remote sysplex (PH14185)

Create Workflow

* Location (system) of definition and variable input files:

PLEX1.SY1 - Local

PLEX1.SY1 - Local

PLEX2.PEV155

../usr/ppr/zos/mr/samples/app/app/ppr/pev155/workflow_sample_include_external.xml

Workflow variable input file: ?

Select or type

< Back Next > Finish Cancel Help

- With APAR PH13729, workflow now uses current logon user's credential to read workflow definition artifacts.

Software Update Phased Delivery Plans

- Install **Corrective** updates
 - Planned availability in summer 2020.
- Install **Recommended** and **Functional** updates
 - Planned availability later in 2020.

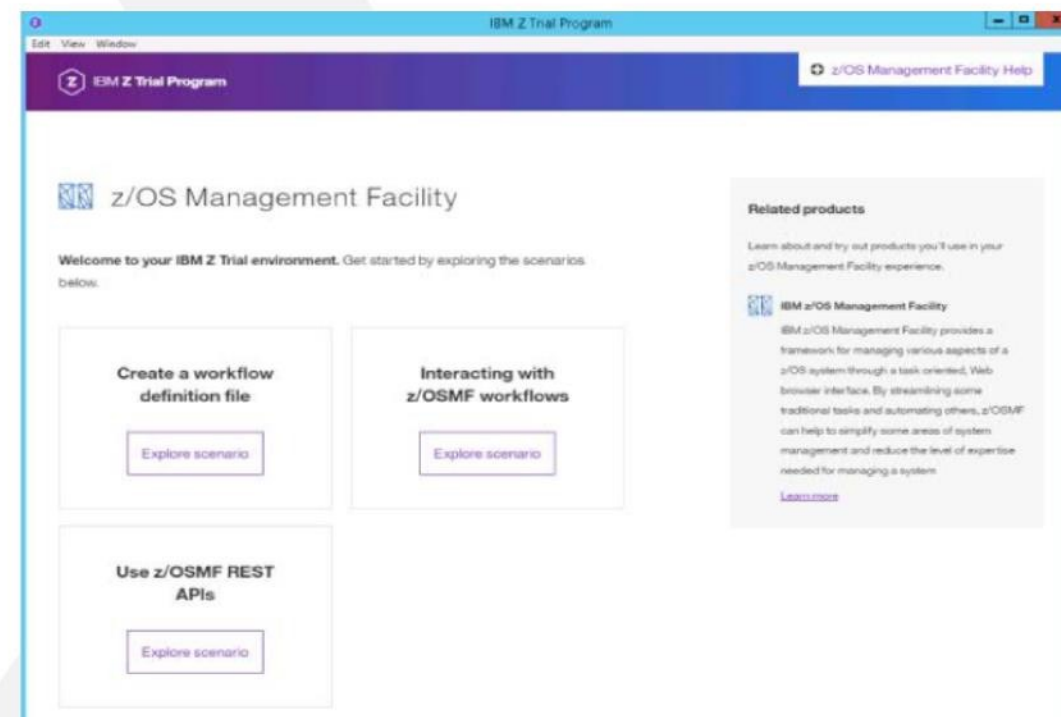
Summary

z/OSMF Trial

- z/OSMF Trial provides hands-on tutorials and a free z/OSMF where you can try z/OSMF without the need of configuring z/OSMF.

<https://www.ibm.com/account/reg/us-en/signup?formid=urx-34578>

- z/OSMF Trial includes the following scenarios today. More scenarios will be added later.
 - Create a workflow definition by using z/OSMF Workflow Editor
 - Interacting with z/OSMF Workflows
 - Building your own program to leverage z/OSMF REST APIs
 - Explore z/OSMF Incident Log (Coming soon)
 - Work with z/OS Operator Consoles (Coming soon)
 - Use z/OSMF Resource Monitoring (Coming soon)



Other z/OSMF links

- z/OSMF one stop hub

<https://ibm.github.io/zOSMF/>

[About z/OSMF](#)[Get Started](#)[Documentation](#)[Community](#)[User Reference](#)[Contact Us](#)

News

z/OSMF V2R4 is now available. [Learn More](#)

About z/OSMF

IBM z/OS Management Facility (z/OSMF) provides a framework for managing various aspects of a z/OS system through a task oriented, Web browser interface. By streamlining some traditional tasks and automating others, z/OSMF can help to simplify some areas of system management and reduce the level of expertise needed for managing a system.

- Learn more about z/OSMF:

[z/OSMF Knowledge Center](#)[z/OSMF Overview](#)

- Explore spotlights and key features of z/OSMF:

[z/OSMF Marketplace](#)

Get Started

IBM Z Software Trials (z/Trial) provides a no-charge trial for z/OSMF without installation required:

[z/OSMF Trial](#)

You can also go to the GitHub repository to download the demonstration of z/OSMF functions:

[z/OSMF GitHub](#)

Here are a series of tutorial videos and online courses for z/OSMF plugins:


Desktop Dataset Search


Import Manager


Workflows


Capacity Provisioning


z/OS Operator Consoles


Workload Management


Incident Log


Sysplex Management


Security Configuration Assistant


Network Configuration Assistant


TSO/E Address Space Services


Dataset REST Services

Documentation

We provide some expert documentations for you to learn more about z/OSMF:

[z/OSMF Configuration Guide](#)[z/OSMF Programming Guide](#)[z/OSMF Redbook](#)[z/OSMF New Function APARs](#)

Community

We provide a worldwide community which offers business and technical experts, blogs and forums to exchange ideas, connect through shared interests and develop expertise:

[z/OSMF Community](#)

Other z/OSMF links

- **z/OSMF Marketplace page**
- <https://www.ibm.com/us-en/marketplace/zos-management-facility>
- **z/OSMF V2R3 Redbook**
<http://www.redbooks.ibm.com/abstracts/sg247851.html>
- **Slack channel for z/OSMF adoption**
 - **Purpose:** Help with questions about z/OSMF adoption especially for z/OSMF configuration questions.
 - **How to join in:**
 - Step 1 Join Open Mainframe Project on Slack: <https://slack.openmainframeproject.org/>
 - Step 2 Search channel “zosmf-adoption” and join it
 - Step 3 Ask z/OSMF configuration or adoption question
 - No guarantee of service. May experience delay due to different time zone.

- z/OS Workflows are available at GitHub, Inc.
- <https://github.com/IBM/IBM-Z-zOS/tree/master/zOS-Workflow>
- *Downloading individual files*
 - To download an individual file, click the link for that file.
 - Click the Raw or Download button.
 - If the file is not saved to your Downloads folder automatically, right-click and select Save Page as... and choose a location for saving the file.
 - You may have to set the Save As type to All files.

z/OSMF Workflow and Editor - Resources



- SHARE Phoenix Labs for Workflows and Other z/OSMF Topics in Room 102B
- Thursday 11:15-12:15 (session 24706) BYOD (Bring Your Own Device)
- Thursday 16:30-17:30 (session 24344)
- (no Workflow Editor option this time)
- See SHARE San Jose March 2017 for [Workflow Editor Lab Workbook](#)
- [z/OSMF Programming Guide](#)

z/OSMF Workflow and Editor - Resources



- The z/OSMF Workflow Editor is provided in z/OS V2.2 PTF UI42847 (closed December 14, 2016 and is RSU1703), and the z/OSMF V2.1 PTF UI43814 (closed January 27, 2017 and is RSU1706).
- z/OSMF Workflow Substitutions in Template filepath require a recent PTF:
- UI60075 z/OSMF WF/WFE filepathsubs. err SASI PH04420
- z/OSMF Workflow Substitutions in Template DSNNAME require an Open APAR due in May:
- PH09499 z/OSMF WF/WFE dsname subst. err SASI PH09499

z/OSMF Workflows, Editor, Recent Changes

Thank You

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